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Emotional and physiological reactions to social rejection : the development and validation of the tendency to expect rejection scale and the relationship between rejection expectancy and responses to exclusion

Rebecca L. Jobe

To the Graduate Council:

I am submitting herewith a dissertation written by Rebecca L. Jobe entitled "Emotional and physiological reactions to social rejection : the development and validation of the tendency to expect rejection scale and the relationship between rejection expectancy and responses to exclusion." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Warren H. Jones, Major Professor

We have read this dissertation and recommend its acceptance:

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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Vice Provost and
Dean of Graduate Studies

Emotional and Physiological Reactions to Social Rejection: The Development and Validation of the Tendency to Expect Rejection Scale and the Relationship between Rejection Expectancy and Responses to Exclusion

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Rebecca L. Jobe
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Dedication

This dissertation is dedicated to my husband. Throughout my graduate career, he has been my cheerleader, my critic, my computer expert, my entertainer, my advisor, my rock to lean on, my cushion on which to fall, my provider, my best friend, and my motivation for everything that I do. Even though I am very proud to have earned the title "Dr. Rebecca Jobe," I will always feel most honored to be "Mrs. David Jobe."

Thank you, Dave, for everything.

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Abstract

According to the need to belong theory (Baumeister & Leary, 1995), human beings are motivated to avoid exclusion and maximize their chances of inclusion into social groups. Beyond this basic premise, little is known about the immediate and long-term psychological and health consequences of social rejection. In part, the lack of research in these areas is due to limited methodological measurements of rejection.

Therefore, the purpose of the present research was to (a) develop a reliable and valid measure of rejection sensitivity and (b) to assess the emotional and physiological responses to hypothetical and actual rejection experiences.

Study 1 involved 465 participants, and the objective was to develop a reliable measure of rejection expectancy (Tendency to Expect Rejection Scale; TERS). Classic psychometric tests yielded an 18-item scale, with a mean inter-item correlation of .26 and a coefficient alpha of .86.

Study 2 (N = 195) attempted to demonstrate the psychosocial validity of the TERS by comparing scores on the TERS to scores on other relevant measures of personality. Results supported the validation of the TERS, with scores on the TERS being positively related to scores on other measures of social evaluative concern and inversely related to optimism and spiritual well-being.

Study 3 (N = 170) focused on convergent, discriminant, and criterion validity of the TERS with respect to responses to one-item adjectives of affective states, and assessed individuals' responses to hypothetical rejection scenarios in relation to their

scores on the TERS and other related measures.. Additional validity was shown in this study, with scores on the TERS being positively correlated with emotional feelings such as depressed, lonely, fearful, and rejected, inversely related to optimistic, satisfied, and included, and unrelated to confident and energetic. Rejection expectancy was also related to severity ratings of eight out of the twelve rejection scenarios. Further, TERS scores were associated with higher severity ratings, regardless of the relationship to the transgressor. Also, it appears that one's level of rejection expectancy is related to severity ratings of hypothetical scenarios for low and high severity transgressions, but not moderately severe events.

Study 4 focused on further validation of the TERS through physiological measurements during an actual rejection experience Thirty-eight female participants were rejected by their peers on the basis of personal information. A repeated measures design was implemented to examine the immediate physiological consequences of experiencing rejection. Participants were asked to write personal essays and then choose with whom they would least like to work out of a group of five individuals while physiological measurements were assessed. Participants were then informed that the other members had voted them out of the group. Results indicated that high TERS females experienced greater physiological arousal (SBP) than low TERS females during the tally phase (anticipated rejection) and following rejection. Thus, it appears that there may be psychological as well as immediate health consequences to experiencing exclusion in everyday life.

This research attempted to create a reliable and valid measure of rejection expectancy, and provide insight about the psychological and health consequences of being excluded in social situations. The results support the reliability and validation of the new scale, and provide a foundation for the relationship between one's expectations about exclusion in social situations and the health consequences associated with experiencing social rejection.

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CHAPTER 1: INTRODUCTION

Being socially accepted by others is perhaps one of the primary needs of humankind (Maslow, 1987; Baumeister & Leary, 1995). Baumeister and Leary (1995) posited that being accepted into social groups is necessary for overall personal health and further, that exclusion directly threatens one's well-being. Specifically, belonging to groups serves a fundamental and innate human need to form and maintain close personal bonds. For example, researchers have found that dissolution of interpersonal relationships is associated with negative emotional feelings, even when those relationships are relatively superficial (Williams & Sommer, 1997; Kelly & Jobe, 2002).

According to the Need to Belong Theory proposed by Baumeister and Leary (1995), belongingness needs influence not only an individual's emotional states and cognitive processes, but also one's physical well-being. For example, correlational research has shown that children who feel lonely and excluded are less physically fit and less physically active in general than nonlonely included children (Page, Frey, Talbert, & Falk, 1992). This suggests that feelings of social exclusion may have both psychological and physical consequences for the individual.

Although examining social rejection as a broad construct is relatively new within the field of psychology, much scientific attention has focused on what might be characterized as *types* of exclusion such as betrayal (Jones, 1990; Fitness, 2001), teasing (Gleason, Alexander, & Somers, 2000; Kowalski, 2000), bullying (Olweus, 1980), and ostracism (Williams & Somner, 1997; Williams & Zadro, 2001). Recent

investigation has looked more closely at all forms of social exclusion and the effects of long-term rejection on the individual. Several researchers have noted that the recent school shootings (e.g., Columbine High School, Colorado in 1999) seem to have one common element or theme: the incidence of some form of social rejection (Kelly & Jobe, 2002; Levy, Ayduk, & Downs, 2001). Due to the possible magnitude of the effects of social rejection (both the psychological and physical consequences to the victim *and* the possible aftermath that others may feel as a result of someone being excluded), further research is needed to examine all of the components of experiencing rejection.

Social Rejection: Measurement and Findings

Because social rejection is a relatively new area of interest in the field of psychology, the research on exclusion is scattered across differing methodologies. Although some studies include self-reported feelings of rejection, others involve peer ratings of one's inclusiveness or rejection manipulated in laboratory settings.

Self-report

Speculation by Bowlby (1969) that children who feel secure in the relationships with their caregivers will in turn, feel secure and supported in future relationships has brought attention to the possible role that attachment style plays in relationship expectancy. Specifically, Bowlby (1969) proposed that children's expectations about their current and future relationships was based primarily on whether or not they felt their basic needs were rejected or fulfilled by their primary caregivers.

Feldman and Downey (1994) extended this notion that parental rejection has an impact on future relationships, and claim that rejection from caregivers leads to higher expectations of being rejected by significant others in general. In other words, these researchers suggest that exposure to rejecting parenting during childhood leads to rejection sensitivity. Thus, those who viewed their parents as cold or unapproachable (and therefore in a way perceive themselves as rejected by their caregivers) tend to be more sensitive to exclusion in general. On this premise, Downey and Feldman (1996) developed the Rejection Sensitivity Questionnaire (RSQ) to assess the degree to which one would feel anxious about asking someone for something and the expectation that one would be rejected when making a request. Rejection sensitivity is defined as the tendency to "anxiously expect, readily perceive, and overreact to rejection" (Feldman & Downey, 1994). The RSQ is an 18-item scale that consists of behaviors in which college students may engage (e.g., asking someone in class if you can borrow his/her notes; asking your boyfriend/girlfriend to move in with you). Participants respond to each item twice; first they indicate the degree to which they would feel anxious making the request to the other individual and then they indicate the extent to which they would expect the other person to agree to the request.

Research using the RSQ has shown that individuals who score high, as opposed to low, on rejection sensitivity tend to report less satisfaction in their intimate relationships (Downey & Feldman, 1996), display more negative behaviors during conflicts with their partners (Downey, Freitas, Michaelis, & Khouri, 1998), and more

readily perceive rejecting cues from their romantic partners (Downey & Feldman, 1996). Therefore, highly rejection sensitive people tend to look for confirming evidence that rejection from their partners and others is imminent. This, of course, may lead to highly stressful, conflictual, unstable relationships. Downey, et al. (1998) tested the hypothesis that such insecure behavior on the part of highly rejection sensitive individuals may lead to relationship breakup. Over the course of one month, committed couples were instructed to keep daily diaries describing details of their relationship circumstances (i.e., whether or not they had experienced a conflict with their romantic partner that day). A one year follow-up study showed that 29% of the couples in the initial diary study had broken up, with the majority of the dissipated relationships being those that contained at least one highly rejection sensitive person. Although scores on the RSQ seem to predict certain aspects of personality and relationship behavior, there seem to be inherent concerns with the administration and interpretation of scores. Because this is the only rejection sensitivity scale currently in use, this raises serious issues that will be discussed in detail later in this chapter.

Other self-report studies have investigated rejection through retrospective accounts of being excluded. Gleason, Alexander, and Somers (2000) surveyed college students about their memories of being teased during childhood. Results indicated that certain types of teasing in childhood were associated with lower self-esteem in adulthood. Similarly, Alberts, Kellar-Guenther, and Corman (1996) asked college students to describe their experiences of teasing and found a distinct pattern of responding according to the perceived intent of the teaser. Specifically, respondents

reported that they were more likely to react positively if they interpreted the teasing as humorous rather than harmful. Conversely, when participants assumed that they were being teased in a hurtful way, they were more apt to react negatively to the teasing. Therefore, among adults the interpretation of rejection appears to depend largely on the context of the "excluding" behavior, at least when the rejection is somewhat obscure (i.e., teasing).

Actual / Imagined Rejection

Several studies have involved measurement of either actual or imagined rejection. Peer nomination studies have been a popular methodology in studying childhood peer rejection, and such studies have yielded consistent findings. Asher and colleagues (1984; 1985) have assessed peer status in several studies by two primary means: (a) having children choose their three most liked and least liked same-sex classmates from a class roll and (b) having children rate each of their same-sex classmates' likeability on a Likert-type scale. In each case, every child's peer social status is computed and they are categorized according to popularity (e.g., popular, rejected, neglected, average, controversial). Specifically, children who are categorized as well-liked with few ratings of being disliked are labeled as "popular." Those who are rated high on being disliked and low on favorability are categorized as "rejected." "Controversial" children obtain high ratings of like and dislike from their peers, and "average" children receive a moderate number of nominations for both liked and disliked peers. Finally, those who receive few nominations overall are categorized as "neglected." Across studies, rejected children are more lonely than other children, and

to a greater degree, manifest aversive social qualities such as aggressiveness and anti-social behavior patterns (e.g., Parkhurst & Asher, 1992).

Nezlek, Kowalski, Leary, Blevins, and Holgate (1997) studied the effects of exclusion based on either the ostensible preference of other individuals or random selection. One hundred and sixteen participants were asked to exchange personal information with four other individuals with whom they were never in contact, and then rate with whom they preferred to work based on the information in the personal essay. After the researchers ostensibly calculated the votes for group membership, they informed the participant that they had either been excluded by the other individuals or that they were randomly selected by the experimenter to not be included in the group. Results indicated that one's level of depression was related to reactions to exclusion. Similarly, Leary, Tambor, Terdal, and Downs (1995) manipulated rejection in the same way as Nezlek et al. (1997), and found that exclusion was positively related to negative self-ratings.

Williams and Sommer (1997) studied the effects of initial inclusion followed by sudden, unexplained exclusion by strangers. However, this study made the experience of exclusion more "public" in that each participant was rejected directly by two other individuals. Each participant, along with two confederates, waited in a room while the experimental equipment ostensibly was being set up by the researcher. Within minutes, one of the confederates picked up a ball and bounced it in place, and then tossed it to the other individuals creating a three-way ball-tossing interaction. A short time later, the two confederates began only passing the ball back and forth to

each other, thus excluding the once included participant. The researcher reported several different behavioral cues that were displayed by the rejected participants including looking preoccupied with other things and withdrawing.

Another study replicated the ball-tossing paradigm by Williams and Sommer (1997) with the addition that participants completed self-reported measures of loneliness. Kelly and Jobe (2002) had participants wait in a room (set up like a children's playroom) with two confederates while some equipment for the "actual" study was ostensibly being arranged. After a brief period of time had elapsed, one of the confederates picked up a ball and began throwing in the air, and then eventually to the other two people (thereby recreating the ball-tossing methodology). Following the rejection manipulation, participants completed measures of self-esteem and social anxiety. Loneliness scores were inversely correlated with measures of self-esteem and positively related to social anxiety following the rejection experience.

Kelly and Jobe (2002) also manipulated rejection in a less "superficial" way to investigate the effects of being excluded on the basis of one's appearance and/or personal characteristics. After completing a questionnaire measuring several dispositional variables, the participants, along with five confederates of the study were then told that five out of six of them would be needed for the group portion of the study while the other person would work independently. Each participant ostensibly voted on which member they would least like to work with based on personal descriptions and photographs of every person in the group. The participant was informed each time that he or she had been voted out of the group by the other

individuals, thus creating a sense of social rejection. In addition, the participants were asked to complete a pre-experimental and post-experimental emotional state inventory. Results indicated that those who scored high on loneliness reported marked decreases in positive affect following the rejection experience as compared to those who scored low on loneliness. Similarly, those who reported more positive mood prior to the rejection were able to preserve their positive emotional state while those who reported negative affect prior to being excluded by the group reported more negative mood following rejection (Kelly & Jobe, 2002).

Although the ball-tossing paradigm (Williams & Sommer, 1997; Kelly & Jobe, 2002), as well as other rejection manipulation paradigms, demonstrate the powerful effects of actual rejection in a laboratory setting, similar findings have resulted from having individuals simply imagine being rejected by others. Tambor and Leary (1993) asked participants to imagine that they were either included or excluded in a given social situation. Those who imagined that they were rejected in the hypothetical situation reported significantly more anxiety than their included counterparts. Similarly, Craighead, Kimball, and Rehak (1979) had participants imagine social rejection while physiological measures were being obtained. Prior to and following the experimental manipulation of imagery, individuals completed the Multiple Affect Adjective Check List (MAACL; Zuckerman & Lubin, 1965). Results indicated that although participants showed no individual differences in physiological responses to imagining exclusion, they did report greater depression, anxiety, and hostility following visualization of social rejection scenes.

Other studies have investigated the effects of recalling past rejection experiences. Lawler, Younger, Piferi, Billington, Jobe, Edmondson, and Jones (In press) instructed participants to recall an experience of betrayal and participants were later interviewed about the details of that experience while being monitored physiologically. Results indicated that participants' reactions to recall of an aversive relationship event were related to dispositional characteristics (in this case, trait forgiveness). Therefore, it appears that some aspects of personality may buffer the effects of social rejection, which are manifested psychologically and physiologically.

Social Rejection and Related Constructs

Self-esteem

The connection between self-esteem and feeling accepted by others has been clearly documented by many researchers (e.g., Leary, Tambor, Terdal, & Downs, 1995) In fact, some researchers claim that the primary cause of low self-esteem is being excluded by intimate others (Leary & Kowalski, 1995). According to Sociometer Theory (Leary & Downs, 1995), an individual's degree of "inclusiveness" in their social world paired with his or her level of the need to be included determines one's self-esteem. Further, self-esteem serves as a mechanism for monitoring the likelihood of social exclusion at any given time. Specifically, the aversive feelings that one experiences when excluded from a desired group will help the individual to decipher what behaviors are maladaptive in maintaining social relationships in the future.

Research on self-esteem and exclusion has shown that perceived inclusiveness is directly related to one's sense of self, and that self-esteem may buffer the negative affects of rejection. Leary, Tambor, Terdal, and Downs (1995) found that participants who generally felt included by other people scored higher on trait self-esteem than those respondents who felt less included in their social environments. Kelly and Jobe (2002) found that individuals who have an overall positive sense of self prior to a laboratory manipulation of rejection report less negative affect and more positive affect following the aversive situation as compared to those who viewed themselves in a more negative light. Thus, it appears that high self-esteem may serve as a defense against the experience of rejection.

While social rejection is typically an aversive event for everyone regardless of self-esteem, research has shown that individuals with low self-esteem *expect* to be rejected by others after failing at some task more than those with high self-esteem (Baldwin & Sinclair, 1996). In this regard, Heatherton and Vohs (2000) predicted that threats of rejection would lead low self-esteem individuals to respond differently than high self-esteem individuals. Specifically, the researchers hypothesized that the low self-esteem individuals would react more positively to try to counter the threat of rejection whereas high self-esteem people would react more negatively and thus behave in ways that are aversive to others. To test this prediction, the researchers gave high and low self-esteem individuals a difficult task in which they would either feel as though they had failed (threatening) or not. They were then asked to converse in dyads with another person who would subsequently rate them across several

interpersonal variables. Results supported the researchers' predictions in that high self-esteem individuals were rated as less likeable following the threatening condition than their low self-esteem counterparts. No differences were found on the basis of self-esteem in the control group.

Social Anxiety

Many researchers assert that past interpersonal experiences greatly affect one's expectations of future relationships. Specifically, those who have a history of relationship transgressions may anxiously expect rejection by others in later social situations in comparison to those who have had more satisfying relationship experiences (e.g., Leary & Kowalski, 1995). Research has shown that parents who are perceived as rejecting and demanding by their children are more likely to have children who are high in social evaluative anxiety (i.e., fear of rejection) than parents who are warm and nurturing (Leary & Kowalski, 1995). Thus, early rejection from caregivers may influence one's anxieties and expectations about future exclusion from social relationships.

Downey and Feldman (1996) studied social anxiety and rejection expectancy in college students and found that those scoring high in social anxiety also reported that they expected rejection in their new romantic relationships more than their less-socially anxious counterparts. Thus, it appears that distress and concern about social situations is highly related to one's anticipation of rejection in interpersonal relationships in general. Further, many researchers propose that apparent social

incompetencies may simply be a result of feeling socially anxious, in turn hindering one's ability to interact with others in a socially appropriate and desirable manner.

Williams and Sommer (1997) observed several anxious tendencies in individuals following rejection. After being rejected by two peers, participants were likely to look preoccupied with something else or withdraw completely as compared to their behavior prior to being rejected.

Loneliness

Researchers have often speculated that experiences of rejection are accompanied by feelings of loneliness (e.g. Sermat, 1978) and, more recently, studies have looked at the actual relationship between these two constructs. Although loneliness and rejection share common qualities, the relationship is modest with correlations between measures of rejection and self-reported loneliness ranging from .25 (e.g., Asher, Hymel, & Renshaw, 1984) to .39 (e.g., Parker & Asher, 1993). A review of the relationship between loneliness and rejection reveals that, while the two constructs are similar, distinct conceptual and personality differences exist (*see* Jobe, Jones, & Lawler, 2002).

Research on the relationship between rejection and loneliness has been conducted on both child and adult samples. Stocker (1994) studied eighty-five children (ages 6-16) and found that their relationships with their siblings and mothers were highly associated with the children's feelings of loneliness, level of depressive mood, and behavioral conduct. Specifically, those children who felt rejected by their

families reported higher levels of loneliness and displayed poorer social adjustment than children who characterized their families as warm and accepting.

Longitudinal studies involving peer acceptance have indicated that rejection by peers during childhood has been associated with many forms of psychosocial maladjustment, including higher rates of school drop out and antisocial behavior (Parker & Asher, 1987). Asher and colleagues (1984) studied the effects of peer rejection on emotional adjustment among elementary school children and found that children categorized as "unpopular" reported higher levels of loneliness than those who were rated as "popular." Asher and Wheeler (1985) later revised the initial scale to include two subscales within the "unpopular" labeling of children (rejected and neglected) and found that only the rejected group was significantly more lonely than their popular counterparts. Parkhurst and Asher (1992) extended this research to middle-school children. They also found that rejected students were significantly more lonely than popular students. Further, those categorized as submissive-rejected were more concerned about being rejected by other students in comparison to average children, whereas aggressive-rejected participants did not differ significantly on their expectations of negative interactions with peers (Parkhurst & Asher, 1992).

Although Asher and colleagues (1984; 1985) studied peer rejection from the perspective of others' ratings on classmates, Graham and Juvonen (1998) surveyed middle-school students about their perceptions of their peer status. Results indicated that self-perceived rejection was associated with feelings of loneliness, anxiety, and low self-worth. Similarly, Vernberg, et al. (1995) studied the frequency of aversive

interactions (e.g., being teased, threatened, hit, excluded from social activities) with peers in 130 adolescents and found that a higher incidence of aversive interactions was related to higher self-reported levels of loneliness.

Bhojak and Mehta (1970) investigated reasons for rejection from the point of view of the rejecter in grade-school children. They found that the primary reasons reported for rejecting peers centered around social deviance, such as verbally or physically abusing others and skipping schoolwork. Similarly, Rotenberg, Bartley, & Toivonen (1997) had second-, fourth-, and sixth-graders report how much they would include or reject hypothetical peers with varying degrees of chronic loneliness. Results indicated that the more the peer was chronically lonely, the more he/she was rejected by his/her peers.

Such self-report studies of peer rejection from the perspective of the rejecter are consistent with observational studies showing that children are treated differently by peers based on their peer status. Dodge, Coie, and Brakke (1982) observed fifth-grade children in the classroom and on the playground and found that rejected children were ignored and refused more often than popular children. In another study involving children's play groups, rejected boys were more likely to be the targets of aggression in comparison to other children (Coie, Dodge, Terry, & Wright, 1991).

Research has shown that loneliness is directly related to perceived social exclusion not only among children, but adults as well (Jones & Carver, 1991). Much of the research on adult rejection is embedded in studies involving interpersonal betrayal (Jones & Burdette, 1994; Lawler et al., In press). Baumeister and Dhavale

(2001) speculate that the impact on self-esteem following rejection from a romantic partner or potential romantic partner may be long-lasting. Leary, Koch, and Hechenbleikner (2001) suggest that relational devaluation (the perception that another person does not value the relationship as much as one desires) is one primary reason that rejection (and specifically, betrayal) is so harmful to one's self-worth. In other words, betrayal by a significant other implies that the whole relationship is less important to the perpetrator than to the victim.

Because rejection can be so damaging to the individual, it is important to further investigate the psychological and physiological consequences of being excluded, as well as the concomitant dispositional characteristics of the rejection-sensitive person. To date, there is one self-report measure that is frequently used to assess rejection sensitivity (Downey & Feldman, 1996), which measures anxieties and expectations about rejection in hypothetical scenarios. There is not a current measure of rejection that illustrates one's dispositional sensitivity to exclusion in everyday life. Likewise, few studies have investigated physiological reactions to rejection, and the physiological studies that have been conducted focus on imagined rejection (Craighead et al., 1979) or recalled rejection (Lawler et al., In press). No studies to date have examined physiological reactions to contemporaneous rejection.

Therefore, the purpose of the present studies was first, to develop a reliable measure of rejection sensitivity, and then to validate that measure through psychosocial and physiological means. Specifically, this project included a multi-trait, multi-method approach to the study of social rejection following the creation of a new

measurement tool that assesses one's anxieties about being evaluated negatively in social situations.

Because the only frequently used measure of rejection sensitivity is somewhat difficult to administer, a new reliable tool for measuring rejection expectancy may be beneficial if the response difficulties presented by the RSQ can be minimized. Specifically, individuals are asked to respond to hypothetical scenarios in two different ways: first with the degree to which they would feel anxious about asking a request of another person and second, their expectations about the request being fulfilled. One point of confusion may be that respondents are likely to misinterpret the directions to fill out the scale twice. Also, the RSQ may have potential flaws in the interpretation of scores. Specifically, it is important to note that two individuals may yield the same score on the RSQ and the meaning of those scores may be different due to the multiplicative nature of the scaling. If person X responds that they are very anxious about a request (rating the item with a 6) but not concerned about it being fulfilled (rating their concern as a 1), his/her score will be identical to person Y who is not anxious at all about asking the request (rating the item as a 1) but is concerned about being rejected (rating their concern as a 6). For that particular scale item, both person X and person Y would yield a score of six (6x1 and 1x6, respectively). Thus, a more precise measure of rejection sensitivity which illustrates similar attributes across like respondents may improve the predictability of behavior and attitudes based on expectancy scores. Further, a designation may be made between those who are anxious about requesting assistance and those who fear rejection.

In addition to the need for an alternate way to measure rejection sensitivity, research is needed to explore the acute health consequences of experiencing exclusion. Thus, rejection expectancy will not only be investigated through other self-report measures of social concern, but also through emotional and physiological responses to hypothetical and actual rejection. Conclusions may then be drawn about the relationship between imagined or actual rejection experiences and overall well-being following an aversive social event.

A thorough investigation of rejection sensitivity through a multi-trait, multi-method approach allows for a better understanding of the location of rejection expectancy in the conceptual space of social evaluative concern. These studies sought to explore the nature of rejection sensitivity as an influence on other personality characteristics and general health outcomes.

CHAPTER 2: STUDY 1

Samples

The samples consisted of 868 college students at a large, southeastern university. Study 1 included 465 undergraduates, study 2 consisted of 195 students, study 3 consisted of 170 participants, and study 4 consisted of 38 college women.

Development of a Self-report Measure of Rejection Sensitivity

Because social rejection is a relatively new construct within the field of psychology, little research has focused on developing valid measurement tools to assess one's degree of dispositional rejection sensitivity. Because of this, the present series of studies focused primarily on the development and validation of a new measurement tool to assess rejection sensitivity. In addition, exploratory analysis determined the physiological correlates of rejection sensitivity following a peer exclusion situation.

Study 1

This study focused on the development of a reliable measure of rejection sensitivity (Tendency to Expect Rejection Scale; TERS).

Method

Participants

The sample consisted of 465 college students (296 females and 169 males), who volunteered to participate in this study in exchange for course credit. Participants were recruited by sign-up sheets posted in the Psychology Department. The sample

completed original generated items of the Tendency to Expect Rejection Scale (TERS), and their responses were used for classic psychometric analyses.

Setting

Upon signing-up for this study, students were given a date, time, and location to fill out the 82-item scale. Groups of approximately thirty participants were administered the questionnaire at one time.

Procedure

Item Generation and Selection. Eighty-two items were constructed that appeared to measure rejection sensitivity. Specifically, items were written to assess one's tendency to be anxious or concerned about being evaluated negatively in social situations. The response format consisted of a five-point Likert-type scale (1 = strongly disagree and 5 = strongly agree). Sample items included: "I can accept criticism easily" (reverse scored) and "I often feel left out of things."

Results

Classic psychometric test construction procedures determined which items were retained and which were discarded. As can be seen in Table 1 of Appendix A, five iterations of psychometric analyses determined the final version of the scale. At each iteration, statistical decisions were made to retain or discard each item. At the first iteration, items were retained if the corrected item-total correlation was greater than or equal to .35. At this initial stage, fifty-five items were discarded and twenty-seven were retained for the second iteration. Reliability analyses were run on the remaining twenty-seven items, and the same statistical standard was set for the

retention of items for iteration two. Of these twenty-seven, only two failed to meet the criteria and were subsequently discarded. The third iteration was then conducted, again using the same corrected item-total correlation standard of .35 for retention. One item was discarded following the third iteration. The fourth iteration on the remaining twenty-four items showed consistent internal validity, and no items were discarded based on the previously held statistical standard. A decision was made to reduce the number of items based on repetition. Thus, the fifth iteration was conducted on eighteen items to insure that the reliability of the scale was not compromised by the decision to cut items for this reason.

The final version of the scale consisted of 18 items (see Table 2, Appendix A) assessing the tendency to expect being excluded by others, and consisted of those items with a logical and consistent internal structure and which met initial estimates of validity. The final 18-item scale showed a mean inter-item correlation of .26, and coefficient alpha was .86. Scores on the TERS may range from 18-90, with higher scores indicating higher rejection sensitivity. In the present sample, scores were normally distributed and ranged from 27-88 (Mean = 54.72, sd = 10.50). To assess differences in gender and scores on the TERS, descriptive analyses were performed. The mean scores were 56.23 (sd = 10.65) and 52.25 (sd = 9.60) for females and males respectively. Although scores on the TERS between males and females were not significantly different, it does indicate that females may score slightly higher on the TERS in general as compared to males.

Discussion

The present study sought to develop a reliable measure of rejection sensitivity. Because there is only one other established measure that is currently used, this new measure attempts to add a different dimension to the measurement of rejection sensitivity. Specifically, the RSQ consists of hypothetical situations in which individuals respond to the degree in which they would feel anxious about a situation and the degree to which they would expect to be rejected. Conversely, the TERS ask respondents to rate the degree to which they generally feel excluded by others in everyday life. Not only does the TERS provide an alternative way of measuring rejection sensitivity, it also eliminates some of the potential measurement issues associated with the RSQ. Specifically, the scale is completed once by participants and the scoring is additive rather than multiplicative. Therefore, while similar scores on the RSQ could have different meanings, similar scores on the TERS have less room for interpretation.

CHAPTER 3: STUDY 2

Psychosocial Validation of the Tendency to Expect Rejection Scale

Following the development of the 18-item rejection sensitivity measure, validation of the TERS with other personality variables was needed. Study 2 attempted to assess the relationship between scores on the TERS and scores on other self-report personality inventories.

Study 2

This study demonstrated the psychosocial validity of the TERS. A correlational study was conducted to establish validity of the TERS. Comparisons were made between the TERS and other measures of personality.

Method

Participants

This sample consisted of 195 participants (147 females and 48 males; mean age = 21.85), who volunteered to participate in this study in exchange for course credit. Participants were recruited by sign-up sheets that were posted in the Psychology Department.

Setting

Upon signing-up for this study, participants were given a date, time, and location to fill out the questionnaire. Groups of approximately thirty participants were administered the battery of questionnaires at one time.

Procedure

Upon arrival to the study, participants completed a questionnaire consisting of the Tendency to Expect Rejection Scale (TERS), Rejection Sensitivity Questionnaire (RSQ; Downey & Feldman, 1996), UCLA Loneliness Scale-Revised (Russell, Peplau, & Cutrona, 1980), Generalized Expectancy for Success Scale-Revised (GESS-R; Hale, Fiedler, & Cochran, 1993), Existential Well-Being Subscale (EWBS; Paloutzian & Ellison, 1982), and the Brief Fear of Negative Evaluation (FNE; Leary, 1983).

These measures were used to demonstrate general validity for the TERS. Specifically, the TERS was expected to be positively related to rejection sensitivity, loneliness, and fear of negative evaluation, inversely related to optimism, and unrelated to existential well-being. Because rejection sensitivity is a fairly new construct, the goal of this study was to observe the conceptual location of rejection sensitivity among other measures of sociability.

Rejection Sensitivity Questionnaire (RSQ). The Rejection Sensitivity Questionnaire (Downey & Feldman, 1996) is designed to assess anxiety and expectations about rejection. The RSQ is made up of 18 hypothetical potentially rejecting scenarios in which a request of another person is illustrated (e.g., asking your friend to do you a big favor). Responses are given on a 6-point Likert-type scale. Individuals first indicate the degree to which they would feel anxious about the request presented in the scenario (1 = very unconcerned and 6 = very concerned), and second, the degree to which they expect that another person would reject the request (1 = very unlikely and 6 = very likely). Scores for each item are multiplied, and then the total

for each item is summed. Each participant's average is then calculated by dividing the sum by 18. Test-retest reliability for the RSQ was .83 over a 2-3 week period and .78 over a 4-month period. The RSQ has also been empirically related to other established personality measures such as introversion, neuroticism, social anxiety, and self-esteem.

UCLA Loneliness Scale. The Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980) is a measure of loneliness as an emotional state in everyday life. It is a 20-item scale in which individuals respond on a Likert-type format (1 = never and 4 = often) as to the way in which they generally feel in social contexts (e.g., "I feel in tune with the people around me"). Scores on the Revised UCLA Loneliness Scale correlate significantly with scores on the Beck Depression Inventory (r = .62) and with the original UCLA Loneliness Scale (r = .91). Coefficient alpha for the Revised UCLA Loneliness Scale is .94.

Brief Fear of Negative Evaluation (FNE). The 12-item Brief Fear of Negative Evaluation Scale was developed by Leary (1983) to measure anxiety when interacting with others in a social context. Responses are made on a 5-point Likert-type format (1 = not at all and 5 = extremely) in which individuals scoring high demonstrate more anxiety in evaluative situations, more discomfort when peer evaluations are deemed negative, and a greater desire to meet the approval of others in comparison to those scoring low on the scale. Internal consistency has been demonstrated, with an alpha of .90 and test-retest reliability (over a four-week interval) of .75. The validity of the

FNE has been demonstrated with other reliable measures such as the Social Anxiety and Distress Scale – Anxiety Subscale (r = .32) and the original FNE (r = .96).

Generalized Expectancy for Success Scale (GESS-R). The Generalized Expectancy for Success Scale-Revised was developed by Hale, Fiedler, and Cochran (1992) to examine level of optimism and in regard to expectations about future success. Each item begins with the phrase, "In the future I expect that I will…" and ends with some feeling about futuristic events (e.g., …make a good impression on people I meet for the first time"). The GESS-R is made up of 24 items. Reliability and validity have been adequately demonstrated with the GESS-R. The split-half reliability is .92, and the revised version of the GESS-R is highly correlated with the original version of the GESS (r = .98). The GESS-R has also been positively correlated with other established measures, such as the Life Orientation Test and the Rosenberg Self-esteem Scale.

Spiritual Well-Being Scale (SWBS). The Spiritual Well-being Scale (SWBS; Paloutzian & Ellison, 1982) is a measure of spirituality that consists of two subscales. The existential subscale (EWB) is conceptualized as reflecting a person's sense of purpose and satisfaction in life, independent of religion. The religious subscale (RWB) addresses a person's well-being in relationship to God. Test-retest coefficients were .93 (total scale), .96 (RWBS) and .86 (EWBS). Internal consistency is adequate with alpha coefficients ranging from .78 to .89.

Results

Results supported the validation of the Tendency to Expect Rejection Scale developed in Study 1. As shown in Table 3, the TERS was positively related to rejection sensitivity, loneliness, and fear of negative evaluation and inversely related to optimism. However, it was predicted that the TERS would be unrelated to existential well-being and a significant negative correlation was found between these two constructs, as well as between the TERS and the total score on the Spiritual Well-Being Scale. Interestingly, the TERS was unrelated to religious well-being which is focused more on one's relationship with God. Notably, this study suggests that the newly developed measure of rejection expectancy was only marginally related to the established measure of rejection sensitivity.

Further analyses compared the relationship between loneliness, rejection sensitivity, and fear of negative evaluation with measures of spirituality and optimism as well as with each other to assess the distinct characteristics of each construct. Notably, the TERS and the UCLA Loneliness Scale are the only measures of negative sociability that significantly relate to the total score of spiritual well-being. Further analyses of the subscales of spiritual well-being revealed that all four of the primary scales were inversely related to existential well-being, while only loneliness was significantly related to scores on religious well-being. Exploratory analyses were conducted to assess possible gender differences. These findings are illustrated in Appendix B, Tables 4a and 4b.

Discussion

The purpose of Study 2 was to validate the Tendency to Expect Rejection Scale. First, it was expected that the TERS would be positively related to rejection sensitivity, loneliness, and fear of negative evaluation. Results showed that scores on the TERS were positively related to all three of these established measures in the predicted direction, but the relationship between the TERS and RSQ was only moderate in nature. Thus, those who score high on being anxious about situations in which rejection could occur as measured by the TERS, also tend to report being lonely, sensitive to potential rejection conditions, and fear negative evaluation in general. However, it is important to note that scores on the TERS are related more strongly to scores on both the FNE and loneliness in comparison to the relationship between the TERS and RSQ. One possible explanation of this finding is the nature of the measurement tools. The TERS is a scale that attempts to assess one's dispositional fear of being excluded in social situations. Conversely, the RSQ is a scale that attempts to assess one's degree of rejection sensitivity through hypothetical social situations. Through these different approaches, differences may emerge for the same construct. Also, as mentioned earlier, the measurement issues surrounding the RSQ may contribute to these findings. Further analysis of this relationship should reveal the conditions under which the TERS and RSQ lead to different findings. In addition, it is important to note the strong relationship between the TERS and FNE. Although it appears that these two measures may be accounting for the same phenomena, further

comparisons of rejection expectancy and fear of negative evaluation will be conducted to isolate the differences between the two constructs.

Second, it was expected that the TERS would be inversely associated with optimism about future events. This hypothesis was also supported. Individuals who tend to expect rejection in everyday life also have a more negative world-view concerning their future. Further analyses to assess the relationship between the other social concern measures again revealed slight differences between the TERS and RSQ. Of the four social concern measures, the TERS appeared to be least associated with optimism in this study.

Last, it was expected that scores on the TERS would be unrelated to scores on existential well-being. Because existential well-being has been defined as feeling a sense of purpose in life and therefore is not a "socially-based" construct per se, the significant negative relationship between the TERS and the EWBS was somewhat surprising. However, it could be argued that an individual who is high in existential well-being feels a close relationship with a higher being and a general sense of self-purpose, and is thus *less concerned* with rejection in everyday life. Likewise, scores on loneliness, fear of negative evaluation, and rejection sensitivity were also inversely related to existential well-being. Exploratory analyses of the overall relationships between these measures and spiritual well-being revealed that only the TERS and UCLA Loneliness Scale were correlated with the spiritual well-being total scores. Further, only loneliness was associated with religious well-being. Specifically, those scoring high on loneliness tended to report less religious well-being than their low

loneliness counterparts. The TERS, RSQ, and FNE did not significantly predict religious well-being scores. One possible explanation for this finding is the tendency for high religiosity to be associated with church attendance. Because involvement in church can also be seen as a social outlet, those who attend may feel a stronger sense of social support, and in turn, less loneliness. Although a sense of social support may alleviate lonely feelings, it may not influence social evaluative concern in a similar manner.

CHAPTER 4: STUDY 3

Rejection Sensitivity and Reactions to Hypothetical Rejection Scenarios

Study 2 was conducted to provide an overall conceptualization of rejection sensitivity as it relates to other personality constructs. Study 3 sought to further investigate the relationship between the TERS, RSQ, and related measures, as well as to compare responses on these measures across several negative social situations. In addition, convergent validity and discriminant validity of the TERS were assessed.

Study 3

This study assessed individuals' responses to hypothetical rejection scenarios in relation to their scores on the TERS and other related measures. Participants completed questionnaires and responded to hypothetical rejection scenarios by rating their feelings across several affective states in response to the rejection situation presented. Comparisons were made between scores on the TERS, RSQ, and the UCLA Loneliness Scale across ratings of the rejection scenarios. In addition, further validity of the TERS was explored through individuals' responses to one-item adjectives in which they were asked to rate how they *typically* feel.

Method

Participants

The sample consisted of 170 participants (127 females and 43 males; mean age = 21.77) who were recruited from psychology classes to participate voluntarily in exchange for course credit. The sign-up sheet indicated that participants would be involved in research pertaining to personality and social relationships.

Setting

Upon signing-up for this study, participants were given a date, time, and location to complete the experiment. Groups of approximately thirty participants were administered the questionnaire and rejection scenarios at one time.

Procedure

There were two primary parts to this study. First, participants completed a questionnaire consisting of demographic items, TERS, UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980), and RSQ (Downey & Feldman, 1996), (and the first section focused on respondents' answers on these measures and to the degree that they typically feel several affective experiences). The second part of the study focused on self-reported emotional reactions to hypothetical rejection scenarios. The primary interest in both phases was to examine the effects of TERS scores in relation to typical affective experiences and emotional responses to imagined rejection.

Study 3: Part I

Primary Analyses. To further investigate the validity of the TERS, participants indicated the extent to which several adjectives described the manner in which they typically feel. Responses were based on a 5-point Likert-type scale (1 = rarely / not much at all and 5 = often / very much). A sample of the adjectives that were included is: rejected, lonely, optimistic, depressed, spiritual, and worried. Convergent validity and discriminant validity were assessed through correlational analyses of scores on the TERS and responses to the one-item adjectives. Correlational analyses were also conducted to reassess the relationship between rejection expectancy, rejection

sensitivity, and loneliness. Although these analyses were done in Study 2, a partial replication was performed to obtain the same data from a similar sample of college students.

It was hypothesized that scores on rejection expectancy would be positively associated with certain negative trait emotionality (rejected, depressed, lonely, excluded, fearful, worried, angry, and betrayed) and inversely correlated with certain positive emotional experiences (joyous, optimistic, satisfied, and included). These expected findings would provide convergent validity of the TERS. Responses to the items "spiritual," "confident," and "energetic" were expected to be unrelated to responses on the TERS, thus providing discriminant validity for the measure of rejection expectancy. In accordance with the findings in Study 2, it was expected that TERS, RSQ, and loneliness would all be positively correlated.

Secondary Analyses. Secondary analyses were performed on the RSQ and UCLA Loneliness Scale. It was expected that similar patterns of responding would occur as that on the TERS and therefore, similar patterns were expected between these two scales and the one-item adjectives. However, stronger relationships were expected between the TERS and "rejected" in comparison to the relationship between the RSQ and loneliness and the item "rejected." Exploratory analyses by gender were also conducted.

Study 3: Part II

Following completion of the initial questionnaires, participants were asked to read twelve rejection scenarios and then respond to the severity of each scenario using

a 5-point Likert-type scale (1 = not very severe and 5 = very severe). An example of a rejection scenario was: "You find out your fiancé has been cheating on you." Table 5 of Appendix C shows a complete listing of the twelve rejection scenarios to which participants responded. Scenarios were systematically varied across two variables: relationship to the rejecter and severity of the rejection. In addition to rating the severity of each hypothetical offense, participants were asked to rate the degree to which they would anticipate feeling several emotional states (e.g., upset, anxious, depressed, rejected) in each scenario.

Primary Analyses. It was expected that those scoring high on the TERS would rate certain scenarios higher on severity than those scoring low on the TERS. Specifically, scenarios that were rated low to moderate in severity overall would be rated differently based on one's rejection sensitivity score. Those scenarios that were rated as high in severity overall were not expected to reveal such differences since it was expected that all participants, regardless of their TERS score, would rate those situations as severe. In addition, it was expected that the emotional reactions to the hypothetical rejection experiences would be different based on one's score on the TERS, particularly for low to moderate severity situations. In general, high TERS individuals were expected to imagine feeling more rejected, betrayed, and depressed (as well as other measures of negative affect) than their low TERS counterparts.

Secondary Analyses. Secondary analyses were conducted to assess the manner in which scores on the RSQ and UCLA Loneliness Scale related to severity ratings and emotional reactions to each of the scenarios. It was expected that rejection

sensitivity and loneliness would be related to both severity ratings and emotional reactions to imagined rejection similarly to the TERS. Exploratory analyses were conducted to assess if differences emerged between these scales and the degree to which respondents reported feeling aversively following the scenarios. Exploratory gender analyses were also conducted to assess differences in severity and reactions to hypothetical rejection.

Results

Part I: Scale Comparisons and Adjective Responses

Primary Analyses. To establish further validity of the TERS, participants were asked to respond to a list of adjectives in terms of how they *typically* feel. Results indicated criterion validity with responses on the TERS to the one-item response for "rejected" ($r = .42$, $p < .001$), such that individuals scoring high on the tendency to expect rejection were also more likely to report typically feeling rejected as compared to those scoring low on the TERS. Scores on the TERS and related measures of sociability determined convergent validity. Specifically, as expected the TERS was positively related to rejected, depressed, lonely, excluded, fearful, betrayed, worried, and angry, and inversely related to optimistic, joyous, satisfied, and included. As predicted, scores on the TERS were unrelated to spiritual, providing discriminant validity for the scale. However, the TERS was also expected to be unrelated to responses to confident and energetic, but an inverse relationship was observed.

In addition, correlations among the three primary scales complimented findings from Study 2 concerning the relationship between the TERS, RSQ, and

loneliness. In this study, the TERS was positively related to both the UCLA Loneliness Scale ($\underline{r} = .31$, $p < .001$) and the RSQ ($\underline{r} = .36$, $p < .001$). Likewise, the RSQ was positively related to loneliness ($\underline{r} = .38$, $p < .001$).

Secondary Analyses. Comparisons between the one-item responses and the UCLA Loneliness Scale and the Rejection Sensitivity Questionnaire were also made. Table 6 (Appendix C) shows a complete summary of the relationship between scores on all three measures and the 15 one-item responses. Notably, each scale was similarly related to the one-item responses for "rejected." However, scores on the TERS and UCLA Loneliness Scale were positively related to the one-item responses on "fearful" as expected, while scores on the RSQ were not significantly related. To establish whether or not scores on the three scales were related to overall positive and negative trait affect, total scores for negative emotionality and positive emotionality were computed. Table 7 (Appendix C) shows a correlational summary of the relationship between scores on all three scales and composite positive and negative adjective responses. Although the results suggest that there are slight differences across certain adjectives, responses on the three scales of negative sociability are similar across positive and negative trait affective experiences.

Part II: Analyses of Hypothetical Scenarios

Primary Analyses for Ratings of Severity. Mean scores on ratings of the severity of each situation were computed. Participants rated "You find out that your fiancé has been cheating on you" as the most severe offense (M = 4.91, s.d. = .33), and "You ask your boyfriend/girlfriend to go out and they tell you that they already have

other plans" as the least severe offense (M = 2.25, s.d. = .98). Table 8 (Appendix C) shows the severity ratings, mean severity scores, standard deviations, and ranges for each of the twelve scenarios.

Scores on the TERS were correlated with severity ratings for each rejection scenario. Of the twelve hypothetical situations, TERS scores were significantly associated with severity ratings for 8 of the scenarios. In other words, individuals who scored high on rejection expectancy were more likely to rate the hypothetical rejection situations as more severe in eight out of twelve instances as compared to the severity ratings made by their low rejection expectancy counterparts.

Severity ratings of the four scenarios that scores on the TERS were not associated with were predominantly rated as "moderate" in severity. Specifically, asking parents to help with rent (sixth most severe offense), mother tells your secret (third most severe offense), catch friend going through your purse/wallet (seventh most severe offense), and friend doesn't pay back loan (ninth most severe offense) were not correlated with scores on rejection expectancy.

To further analyze the relationship between TERS scores and severity ratings of rejection situations, the hypothetical scenarios were categorized as low, moderate, or high severity based on their respective ratings. Specifically, extreme ratings were grouped for high and low severity such that the two most severe events (scenarios 3 and 12) were categorized as high severity and the two least severe events (scenarios 4 and 7) were categorized as low severity. The two median severity ratings (scenarios 2 and 8) comprised the moderate grouping for offense severity. It was hypothesized that

rejection sensitivity would be positively related to severity ratings for low and moderate scenarios, but not for high severity scenarios. However, this hypothesis was only partially supported. Specifically, results indicated that TERS scores were positively related to severity ratings of low ($\underline{r} = .38, p < .001$) and high ($\underline{r} = .25, p < .01$) severity ratings, whereas no significant relationship was found between rejection expectancy and moderately severe rejection situations. Differences did emerge between males and females in terms of TERS scores and ratings of severity. As may be seen in Table 9 of Appendix C, high TERS males and females were more likely to rate scenarios 1 (college denies admission), 4 (boyfriend/girlfriend has other plans), 5 (friends don't invite you to a party), 7 (classmate says "No" to date), and 11 (partner wants to see other people) as more severe than low TERS males and females. In addition, high TERS males rated scenario 9 (partner doesn't feel like having sex) as more severe than low TERS males and high TERS females rated scenarios 3 (fiancé cheating) and 12 (parents get a divorce and one moves away) as more severe than low TERS females. Interestingly, the two most severely rated offenses (3 and 12) were not rated significantly different by high and low TERS males, but they were rated differently by high and low TERS females.

Because the hypothetical scenarios were varied by both severity and relationship to the transgressor, analyses examining the correlation between scores on the three scales and severity ratings according to relationship were conducted. The four primary categories for relationship type included: parent, mate, friend, and stranger. As may be seen in Appendix C, Table 10, differences were found among

scores on rejection expectancy, rejection sensitivity, and loneliness across the four relationship types in ratings of severity. Specifically, positive correlations were observed between scores on the TERS and severity ratings of exclusion scenarios involving parents ($\underline{r} = .26, p < .01$), mates ($\underline{r} = .42, p < .001$), friends ($\underline{r} = .17, p < .05$), and strangers ($\underline{r} = .44, p < .001$). Thus it appears that those who are highly rejection-sensitive tend to rate all four types of transgressions (according to relationship to the transgressor) as more severe than those who are low on rejection expectancy. Notably, loneliness scores were inversely correlated with severity ratings of parental transgressions, and RSQ scores were inversely related to severity ratings of mate transgressions. Although all three social evaluative measures were similarly related to severity ratings of stranger rejection scenarios, differences emerged among the measures with respect to ratings of severity for parent, mate, and friend transgressions. Interestingly, the TERS was the only measure to show that those who are highly sensitive to being excluded are consistently more distressed by hypothetical rejection (regardless of the relationship to the rejecter) in comparison to those who are less concerned with being excluded.

Secondary Analyses for Severity Ratings. Table 11 of Appendix C shows the association between TERS, RSQ, and loneliness and severity ratings across scenarios according to scores on each scale. Although scores on the TERS were correlated with severity ratings of two thirds of the scenarios, scores on the RSQ were positively related to severity ratings in four out of the twelve situations, and scores on loneliness

were associated with the severity rating of only one out of the twelve instances, and the relationship was negative in nature.

To further analyze these differences, severity ratings of the most severe offense (fiancé cheating) was only differentiated by scores on the TERS, while severity ratings of the least severe offense (boyfriend/girlfriend has other plans) was associated with both scores on the TERS and RSQ, but not loneliness. The only scenario in which loneliness scores were related was perceived parental abandonment ("Your parents get divorced and one of them moves over 1000 miles away from you.") which was rated overall as the second most severe offense. Both loneliness and rejection expectancy were related to severity ratings of this item, but in differing directions. Specifically, those scoring high on loneliness were less likely to rate the offense as severe in comparison to those scoring low on loneliness ($\underline{r} = -.18, p < .05$). Conversely, those scoring high on the TERS were more likely to rate the offense as severe in comparison to their low rejection expectancy counterparts ($\underline{r} = .19, p < .05$).

Severity ratings of the four scenarios that scores on the TERS were not associated with were predominantly rated as "moderate" in severity, and ratings of these scenarios were also not associated with rejection sensitivity or loneliness. In other words, it appears that severity ratings of these scenarios are similar among individuals regardless of fears of exclusion or feelings of loneliness. To further assess this finding, analyses using the severity categorization of low, moderate, and high were conducted with loneliness and the RSQ. While the TERS was significantly correlated with ratings of both high and low severity scenarios, this was not the case

with loneliness and rejection sensitivity as measured by RSQ. Loneliness scores were correlated with ratings of high severity rejection experiences and RSQ responses were associated with low severity scenario ratings. Table 12 in Appendix C illustrates these findings.

As mentioned earlier, rejection expectancy was related to severity ratings of scenarios according to the relationship with the transgressor. Interestingly, the TERS was the only measure to illustrate differences along all four relationship types. Further, although the TERS, RSQ, and UCLA Loneliness Scale tend to be moderately correlated, it appears that they are conceptually and constructively distinct with respect to imagining rejection. Tables 13a and 13b in Appendix C illustrate the gender analyses based on the relationship to the transgressor in severity ratings of rejection conditions. It is again noteworthy that not only do women and men (based on their scale scores) rate scenarios differently, but also that these scales show distinct properties in their ability to predict severity ratings based on relationship.

Primary Analyses for Affective Reactions to Hypothetical Rejection. Because scores on the TERS detected differences in severity ratings in most of the hypothetical rejection scenarios, it was expected that such differences would also be manifested in individuals' emotional reactions to such instances based on their rejection expectancy scores. With respect to the scenario that was rated as the most severe offense (fiancé cheating), rejection expectancy was positively associated with emotional ratings of feeling rejected ($\underline{r} = .35, p < .001$), lonely ($\underline{r} = .45, p < .001$), depressed ($\underline{r} = .46, p < .001$), and betrayed ($\underline{r} = .24, p < .01$). The least severe offense (boyfriend/girlfriend

has other plans) yielded similar results. TERS scores were correlated with self-reported feelings of rejection ($\underline{r} = .29, p < .001$), loneliness ($\underline{r} = .42, p < .001$), depression ($\underline{r} = .35, p < .001$), and betrayal ($\underline{r} = .25, p < .01$).

Analyses were also conducted to assess the relationship between TERS scores and responses to the emotional reaction item "reject" based on the level of scenario severity. Individuals scoring high on rejection expectancy were more likely to imagine feeling rejected in high severity scenarios ($\underline{r} = .41, p < .001$), moderate severity scenarios ($\underline{r} = .20, p < .05$), and low severity scenarios ($\underline{r} = .40, p < .001$) in comparison to their low rejection sensitive counterparts. In other words, it appears that regardless of the intensity of the rejection situation, those scoring high on the TERS tend to report feeling more rejected than those scoring low on the TERS.

Secondary Analyses for Affective Reactions to Hypothetical Rejection. With respect to the scenario that was rated as the most severe offense (fiancé cheating), rejection sensitivity and loneliness were both positively associated with participants' emotional ratings of feeling rejected ($\underline{r} = .30, p < .001$ and $\underline{r} = .26, p < .01$, respectively), lonely ($\underline{r} = .24, p < .01$ and $\underline{r} = .30; p < .001$, respectively), and depressed ($\underline{r} = .27, p < .01$ and $\underline{r} = .26, p < .01$, respectively). However, scores on the TERS were also positively related to feeling betrayed, but loneliness and rejection sensitivity were unrelated to self-reported feelings of betrayal following this offense.

The offense that was rated second highest in severity (parents get divorced and one moves away) also revealed differences across the three scales. Specifically, one's degree of loneliness was unrelated to how rejected, lonely, depressed, or betrayed

individuals reported feeling in imagining the situation. While scores on the TERS and RSQ were both positively related to feelings of rejection ($\underline{r} = .32$, $p < .001$ and $\underline{r} = .21$, $p < .01$, respectively), only scores on the TERS were also related to self-reported feelings of loneliness ($\underline{r} = .30$, $p < .001$), depression ($\underline{r} = .29$, $p < .001$), and betrayal ($\underline{r} = .24$, $p < .01$) in imagining this offense.

Finally, the offense rated as least severe (boyfriend/girlfriend has other plans) revealed affective differences based on rejection expectancy, rejection sensitivity, and loneliness scores. Specifically, a positive relationship was observed between scores on each of the three measures and self-reported feelings of rejection, loneliness, depression, and betrayal.

Analyses were also conducted to assess the relationship between loneliness and rejection sensitivity scores and feelings of rejection following varying severity scenarios. Similar to the findings with TERS responses, self-reported loneliness and sensitivity to rejection were positively associated with high and low severity scenarios. RSQ scores were also related to feelings of rejection in moderately severe scenarios, but loneliness was not. Table 14 in Appendix C illustrates the relationship between rejection expectancy, rejection sensitivity, and loneliness and feelings of rejection based on the severity of the rejection experience.

Discussion

The purpose of Study 3 was to further validate the TERS, and to assess the effects of rejection sensitivity on emotional reactions to hypothetical rejection situations. First, analyses were done to examine the relationship between scores on

the TERS and affective states. The correlation between the TERS and the one-item adjective "reject" showed strong criterion validity for the TERS, such that those who score high on the TERS also report typically feeling rejected as compared to those who score low on the TERS. Convergent validity and discriminant validity for the TERS were also obtained through participants' self-reported typical affective states. Interestingly, the TERS was also positively related to other expected affective states with which RSQ did not correlate. Specifically, since both rejection measures are, to a degree, attempting to assess one's anxieties about negative evaluation, it was expected that both would be positively associated with related affective states such as "fearful." In actuality, of these two measures only the TERS was significantly related to responses to this emotion. In summary, convergent validity, discriminant validity, and criterion validity were adequately established for the TERS. In addition, although differences did emerge among the three primary measures and responses to the one-item adjectives, all were similarly related to composite emotional states of positive and negative affect.

Although the TERS, RSQ, and loneliness were all related to each other as expected, this study suggested that the TERS might show greater differences in individuals' severity ratings of hypothetical rejection scenarios. Differences did emerge among the scales in analyses of the specific rejection events. Of the twelve scenarios, scores on the TERS predicted severity ratings on eight of the situations, whereas the RSQ and loneliness were significant with only four and one of the scenarios, respectively. Thus, it appears that scores on the TERS are more predictive

of individuals' emotional reactions to hypothetical rejection scenarios. Since these scenarios were varied by relationship to the transgressor and severity, perhaps rejection expectancy as measured by the TERS is more telling of affective response to rejection in general as compared to one's degree of loneliness or rejection sensitivity as measured by the RSQ.

Further analyses examined the relationship between scores on the TERS and affect across the severity of the events. The TERS was significantly correlated with negative affect in both the most severely and least severely rated offenses. Thus, it appears that those who score higher in rejection expectancy report more negative emotions following both minimal offenses and extreme rejections than those who score lower in rejection expectancy. Moderate offenses also distinguished differences in affect based on TERS scores. In this regard, the hypothesis was only partially supported. Whereas differences were expected between high and low TERS individuals for low and moderate exclusion scenarios, differences were not expected for highly severe events. It appears that those who are high rejection sensitive are more apt to react negatively in any rejection situation as compared to low rejection expectancy individuals.

TERS scores were also related to ratings of severity based on the relationship to the transgressor, and it was the only scale to illustrate differences between high and low sensitive individuals across all four relationship types. A positive relationship was observed between TERS and severity ratings of parent, mate, friend, and stranger offenses. Interestingly, inverse relationships were observed between loneliness and

severity ratings of parental transgressions and RSQ and severity ratings of mate transgressions. Further investigation is needed to assess the underlying functions of loneliness and rejection sensitivity in reactions to perceived exclusion.

With respect to emotional reactions to imagined rejection situations, those who scored high on the TERS were more likely to report that they would feel rejected in low, moderate, and high severity scenarios. Further, scores on the TERS are more associated with negative experiences following exclusion than scores on the RSQ or UCLA Loneliness Scale. Again, it appears that the TERS is a more effective measurement tool in differentiating responses to imagined social rejection.

CHAPTER 5: STUDY 4

Physiological Responses to Actual Rejection

The previous three studies support the development and validation of the Tendency to Expect Rejection Scale. Study three revealed differences in scores on the TERS and individuals' reactions to imagined social rejection. To assess further the effects of TERS scores on reactions to social rejection, Study 4 attempted to validate the TERS through physiological means and measure differences between high and low rejection expectancy individuals during anticipated and actual rejection.

Study 4

This study further validated the TERS through physiological responses to manipulated rejection. In addition, differences in cardiovascular reactivity in responses to rejection were analyzed between high and low rejection sensitive people across all phases of the experiment.

Method

A between-subjects (high vs. low rejection sensitivity) experimental design was conducted. Each participant was systematically rejected, and three dependent variables were assessed (systolic blood pressure, diastolic blood pressure, and heart rate) during all phases of the study. Comparisons were made between high and low rejection sensitive individuals across six primary stages: baseline, essay, copy, vote, anticipated rejection, and recovery following rejection. A multivariate, repeated measures analysis of variance was used to assess differences between high and low

rejection sensitive participants, as well as changes within groups across all phases of the study.

Participants

The sample consisted of 38 female college participants who volunteered in exchange for course credit. They were recruited through a sign-up sheet on a bulletin board in the Psychology Department. The sign-up sheet indicated that they were volunteering for a study on group decision-making entitled "Group Dynamics."

Setting

The experiment was performed in the Health Psychology Laboratory and the Personality and Relationships Laboratory at a large university. The experimental rooms were equipped with a chair, desk, and pen.

Procedure

After signing-up for this experiment, each participant completed the initial phase (questionnaire) and was given a date, time, and location to complete the second phase of the study. The questionnaire consisted of the TERS, RSQ (Downey & Feldman, 1996), FNE (Leary, 1983), UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980), Interpersonal Competence Questionnaire (ICQ; Buhrmester, Furman, Wittenberg, & Reis, 1988), Adult Attachment (Bartholomew & Horowitz, 1991), Tendency to Give Social Support (TGSS; Piferi, Billington, & Lawler, 2000), Spiritual Well-Being Scale (SWBS; Paloutzian & Ellison, 1982), and the Brief Cope (Carver, Scheier, & Weintraub, 1989). A brief description of the added scales not previously used in this project follows.

Interpersonal Competence Questionnaire (ICQ). The ICQ was developed by Buhrmester, Furman, Wittenberg, and Reis (1988) to assess one's competence in peer relationships. It is a 40-item measure in which individuals respond on a five point Likert-type scale (1 = I'm poor at this; I'd feel so uncomfortable and unable to handle this situation, I'd avoid it if possible and 5 = I'm extremely good at this; I'd feel very comfortable and could handle this situation very well) to descriptions of interpersonal situations. The scale has adequate internal reliability with alpha coefficients ranging from .77 to .87, and it has been validated with several measures of sociability including social reticence and social skills ability.

Adult Attachment. Bartholomew and Horowitz (1991) proposed a four-group model of attachment styles defined by one's self-image and image of others. The four-group model approach has been shown to be related to several measures of interpersonal relationships such as the degree of intimacy in friendships, self-confidence, and emotional expressiveness.

Tendency to Give Social Support (TGSS). Piferi, Billington, and Lawler (2000) developed a 30-item scale to assess an individual's tendency to provide support to others. Participants respond on a five point Likert-type scale (1 = never and 5 = almost always). The scale contains five subscales that represent different types of social support: emotional support, stress relief, tangible aid, recreational support, and appraisal support. The scale has been shown to be valid through positive correlations with relational trust and interpersonal orientation and inverse correlations with social

reticence and loneliness. It is a reliable measure with an alpha reliability coefficient of .94.

Brief Cope. The Brief Cope (Carver, Scheier, & Weintraub, 1989) is comprised of 14 different subscales, each consisting of different coping mechanisms. The scale is made up of twenty-eight items (2 items per coping style) in which participants respond on a 4-point Likert-type format (1 = usually not at all and 4 = usually a lot). Cronbach's alpha shows sufficient internal consistency, reaching at least .60 on all subscales. Two test-retest reliability analyses resulted in reliability ranging from .42 to .89 among the subscales across six and eight week intervals. Validity evidence was shown by comparing each of the coping styles with other related measures. Correlations ranged from .41 to -.34 for the relationship between the coping styles and life satisfaction and from .23 to -.29 for the relationship between the coping styles and hardiness.

Participants arrived one at time and each student was escorted to a private experimental room where she did not have contact with other participants. The participant was then asked to give consent for participation in the study. Each participant was given an explanation of the experimental process and procedures in as much detail as possible without revealing the purposes of the study. The participant was told that the researchers were interested in the decision-making process of groups, and that she may later be involved in a group interaction with three other participants. Participants were informed that they could withdraw from the experiment at any time without penalty.

Following the initial instructions, the participants were hooked up to the blood pressure cuff. After testing the equipment to insure the individual's comfort and that reliable readings were accessible, the participant was asked to sit quietly for 9 minutes to obtain baseline readings of blood pressure and heart rate. Physiological measurements were taken at minutes 2, 4, 6, and 8 during the baseline phase.

After 9 minutes had passed, the participant was asked to write a personal essay entitled "Who I am" that ostensibly would be read by the other participants in the group. The experimenter informed the participant prior to completing the essay that only four out of the five participants would be needed for the group task, and that the goal of the initial stages of the study was to find the most cohesive group of four individuals. The experimenter also informed the participant that the best way to accomplish a cohesive group was to have the actual members of the group vote on with whom they would most like to work. The experimenter further explained that the fifth, non-selected member of the group would work independently on a math task while the rest of the group was engaged in an interaction. After the experimenter had given the instructions, she informed the participant that she had approximately 5 minutes to complete the essay, and then left the experimental room. Physiological measurements were taken at minutes 2 and 4 during the essay phase of the study.

After approximately 5 minutes had passed, the experimenter returned to the participant's room to collect the personal essay. The participant was then informed that the experimenter would leave to photocopy all of the participants' essays and create a folder of essays on which each participant would vote. The researcher

explained that she would return in approximately five minutes with a folder of the others' essays, and the participant would be asked to subsequently vote on the one individual with whom they would least like to work. Physiological measurements were again taken at minutes 2 and 4 during the waiting phase of the study.

After five minutes had passed, the experimenter returned with a folder of bogus photocopied essays for the participant to review. The participant was asked to carefully read through the essays and vote within five minutes on the individual they would least like to work with, based on the information in the essays. The experimenter showed the participant the vote sheet that was placed in the essay folder. Each essay was numbered at the top (1,2,3, and 5) and the participant was instructed to circle the number on the vote sheet that corresponded with the participant with whom she would least like to work. The experimenter also pointed out that number 4 was not included in the folder because that was the participant's essay and each participant would only vote on the other four individuals in the study. The experimenter then answered any questions about the process and left the room. The folder and the vote were then retrieved after five minutes had passed, and the participant remained in the room for 5 minutes while the votes ostensibly were being tallied. During the vote phase, physiological measurements were taken at minutes 2 and 4. Following the vote, physiological measurements were taken at minutes 1, 3, and 5 to assess the effects of impending peer evaluation.

After 6 minutes had passed, the experimenter informed the participant that they had been unanimously voted out of the group, and that they would be asked to start the

individual task shortly. Physiological measurements following the rejection experience were taken at minutes one, three, and five while the researcher ostensibly set up the group interaction with the other "participants." The researcher then returned to the experimental room after the post-rejection measurements were taken and asked the participant several follow-up questions concerning the study. After some initial questions to assess participants' knowledge of the events of the experiment, the participant was informed of the full purposes and procedures of the study and allowed to voice any questions or concerns. The debriefing process extended as long as needed with each participant.

Primary Analyses

It was expected that high rejection sensitive individuals would yield higher physiological reactions during anticipated rejection and following rejection in comparison to their low rejection sensitive counterparts. Specifically, differences in high and low TERS individuals were not expected at baseline or the following three phases of the study (essay, waiting, and vote). However, differences were expected to emerge between the two groups while the votes were being tallied (anticipation of rejection) and after the participants were told they had been excluded from the group. A multivariate repeated measures analysis of variance was conducted to assess the overall model of physiological changes for the groups across the phases of the study. Closer inspection of the differences between high and low TERS during the final two phases also was conducted using multivariate analyses of variance (MANOVAS).

Secondary Analyses

It is also hypothesized that the TERS would be inversely related to interpersonal competence, the tendency to give social support, and positive coping styles. In addition, those who scored high on the TERS were expected to be more insecurely attached than those who scored low on the TERS. Relationships between the TERS, FNE, loneliness, RSQ, and SWBS were expected to replicate the previous findings in this project. Regression analyses were conducted to determine the influence of these other measures of personality in predicting TERS scores.

Results

Due to incomplete data, only 23 of the 38 women in the sample were used for analyses in this study. Incomplete data resulted from individuals wanting to remove the blood pressure cuff due to discomfort or due to error readings during the study when an accurate measurement could not be assessed. Because the ambulatory monitors used to assess physiological measurements were highly sensitive, many unavoidable random error readings emerged throughout the study. Inclusion in the analyses required accurate readings during each phase of the study.

Primary Analyses

To assess the effects of TERS scores on physiological reactions during all phases of the rejection experiment, a median split was conducted to form high and low TERS groups. Scores on the TERS ranged from 26-66. A median split of this sample determined that scores ranging from 26-45 represented those low in rejection expectancy (N = 19) and those with scores between 46-66 were categorized as high

rejection expectancy (N = 19). It is important to note that both high and low TERS women were equally excluded from analysis based on incomplete data, and the final sample included eleven low TERS women and twelve high TERS women. A multivariate repeated measures analysis of variance was conducted with high and low rejection expectancy females across all phases of the study. Results revealed a non-significant repeated measures model for TERS groups in terms of systolic blood pressure (SBP), diastolic blood pressure (DBP), and heart rate (HR). However, it was predicted that differences would be observed between high and low rejection sensitive individuals during the final two phases of the study, and descriptive analyses showed dramatic differences in the means of SBP between the two groups during these phases (see Figure 1, Appendix D). Therefore, a multivariate analysis of variance (MANOVA) was computed specifically on the tally and rejection phases of the study. With regard to SBP, no significant differences were found between high and low TERS during the baseline, essay, copy, or vote phases of the study. However, differences in SBP were observed between high and low TERS individuals during the tally phase and following rejection.

Interestingly, these differences were not observed at minutes 1 and 3 following rejection, but differences did emerge at minute 5 following exclusion ($F = 5.54$, $p < .05$). In other words, females high in rejection expectancy had higher systolic rates prior to rejection during the tally phase and following rejection than their low TERS counterparts. However, the differences observed following rejection appear to be "delayed," such that the immediate effects of rejection did not reveal such differences.

Scores on the TERS did not reflect differences in physiological reactions across phases with respect to diastolic blood pressure or heart rate.

Secondary Analyses

To observe further the relationship between the TERS and other related measures, correlational analyses were conducted among the TERS, RSQ, FNE, UCLA Loneliness Scale, ICQ, SWBS, TGSS, attachment style, and coping. The relationships among the social concern measures were similar for this sample of women as compared to the previous studies assessing the relationship among these variables. Specifically, the TERS was positively associated with the RSQ, UCLA Loneliness Scale, and FNE, and inversely related to scores on the SWBS and existential well-being. In addition, TERS scores were correlated inversely with interpersonal competence and the TGSS emotional support subscale. Additional analyses were conducted to assess the relationship among RSQ, FNE, and loneliness and interpersonal competence and giving social support. Table 15 of Appendix D illustrates these findings.

The hypothesis that rejection sensitive individuals would be more insecurely attached than their less sensitive counterparts was not supported. In fact, of the twenty-three participants, only twenty completed the attachment portion of the survey (10 high sensitive females and 10 low sensitive females) and equal numbers from each group

endorsed insecure and secure attachment styles. Specifically, six high TERS females and six low TERS females rated themselves as securely attached and four high TERS females and four low TERS females categorized themselves as insecurely attached.

Analyses were performed to investigate the relationship between rejection sensitivity and coping strategies. It was expected that high TERS females would partake in less positive coping strategies in comparison to their less rejection sensitive counterparts. Of the fourteen coping dimensions measured, rejection expectancy was related to three particular styles. Specifically, rejection sensitivity was inversely related to active coping strategies ($\underline{r} = -.45, p < .05$) and venting ($\underline{r} = -.46, p < .05$), and positively related to the usage of behavioral distractions in coping with stressful events ($\underline{r} = .53, p < .05$). Further analyses were performed to assess the relationship between coping styles and other measures of social evaluative concern (specifically the RSQ, UCLA Loneliness Scale, and FNE). Scores on the RSQ were related to the same three dimensions of coping (and in the same direction) as those related to scores on the TERS. Interestingly, scores on the FNE were related to only one dimension of coping (active coping) and loneliness was related to four dimensions of coping (but only one of which scores on the TERS was related to). Although loneliness scores also correlated with the use of behavioral distractions in coping with stress, high scores on loneliness were also positively related to denial and inversely related to religious coping and using emotional support to alleviate stress. Thus, it appears that females who tend to expect rejection are more likely to use coping styles that focus away from dealing directly with the stressful event in comparison to low rejection sensitive

individuals. Further, it appears that the four primary scales of social evaluative concern reveal differences across the coping strategies.

Finally, a stepwise regression was conducted to investigate the model in which other personality measures predicted scores on the TERS. The FNE, UCLA Loneliness Scale, RSQ, SWBS, TGSS, and attachment style were placed in the regression model. Specifically, the FNE accounted for 63% of the variance in predicting TERS scores, and the remaining measures did not significantly contribute further to the regression model.

Discussion

Experimental manipulation also revealed differences in individuals' reactions based on TERS scores. Specifically, those scoring high on rejection expectancy had higher systolic blood pressure five minutes after the rejection experience in comparison to those low in rejection expectancy. Thus, several important points emerge. First, it appears that the level of sensitivity may affect the manner in which one reacts physiologically to exclusion, at least for females. Females who are high in rejection expectancy may experience heightened cardiovascular arousal following exclusion in everyday life. Unfortunately, this finding may have negative implications for the health of females who are highly concerned with being evaluated by others in social situations. Second, the notion that this cardiovascular reaction may be "delayed" leads one to wonder just how long this heightened state of arousal may persist. In the present study, the physiological measurements following rejection were limited. It is possible that high TERS females have a momentary "spike" in reactivity

following the event that is captured in only a few readings. However, it is also possible that their heightened arousal is much more extensive, and remains higher for several minutes or even hours as compared to low TERS women. If the latter is the case, there are conceivably much greater consequences to experiencing social exclusion, both physiologically and psychologically. Future research should further investigate these possibilities, as well as one's current health status, to determine the extent to which rejection expectancy leads to heightened physiological arousal.

Correlational analyses revealed similar findings to the previous studies with regard to the association between the TERS and other measures of social concern. This provides further validation of the TERS.

CHAPTER 6: GENERAL DISCUSSION

This series of studies sought to develop a reliable and valid measure of rejection expectancy, and investigate the emotional and physiological reactions to exclusion based on one's level of rejection sensitivity. Studies 1 and 2 focused on the development and validation of the Tendency to Expect Rejection Scale. Specifically, the TERS was positively correlated to other measures of social concern such as the RSQ and UCLA Loneliness Scale and inversely related to interpersonal measures such as optimism and existential well-being.

Study 3 further validated the TERS through individuals' responses to one-item adjectives assessing the manner in which they typically feel. Again, convergent validity was supported as the TERS was related to self-reported feelings of rejection, depression, betrayal, and loneliness to name a few, and inversely related to feelings of inclusion and joy. Discriminant validity was shown for the TERS as it was unrelated to feeling energetic and confident. Study 3 also focused on individuals reactions to hypothetical rejection scenarios based on their level of rejection expectancy. Specifically, scores on the TERS predicted severity ratings for two thirds of the scenarios, and high rejection sensitive individuals tended to rate high and low severity scenarios are more devastating than low rejection sensitive individuals. Scores on the TERS also influenced severity ratings of the scenarios based on relationship to the transgressor.

Finally, Study 4 focused on the immediate physiological consequences to experiencing exclusion. High rejection sensitive females were expected to show

increases in physiology during the anticipated rejection phase and following rejection as compared to low rejection sensitive females. Results indicated that, although rejection expectancy did not affect physiology at baseline or during the other "neutral" phases of the study, those who were rejection sensitive did have significantly higher systolic blood pressure during the tally and rejection phases of the study as compared to their low rejection sensitive counterparts. This was expected due to the nature of these two phases. Specifically, the tally phase entailed the ostensible counting of the votes, so the participants were anticipating either inclusion or exclusion during this waiting period. It is reasonable to assume that those who are highly concerned about being included in social situations would be more aroused during this phase as compared to those who are less concerned with social inclusion. That such concern would be manifested physiologically was not surprising. Also, the rejection phase was expected to reveal differences between high and low rejection-sensitive individuals. Although rejection is a negative experience in general for people, it was expected that those most concerned about being excluded would experience more intense negative feelings and, in turn harbor those negative feelings for a longer period of time. Indeed, these differences did emerge between high and low TERS women in their levels of SBP across the final phases of the study.

Thus, it appears that rejection in everyday life not only has more psychological ramifications reflected by one's TERS scores, but also immediate health consequences. Study 4 also provided further validation of the TERS. Rejection expectancy was shown to be inversely associated interpersonal competence and some

measures of giving social support and coping. On the other hand, attachment style seemed to be unrelated to one's level of rejection expectancy.

The present studies provided a basis for the location of rejection sensitivity in the conceptual space of social concern. As noted earlier, there appears to be a link between social exclusion and negative psychological and health outcomes. Previous research has shown that lonely individuals may actually perpetuate their own isolation through their inability to effectively interact with others (*see* Jones and colleagues). Likewise, social support has been shown to be a strong predictor of overall well-being (Piferi et al., 2000), and it appears that rejection sensitive people may not only lack a strong supportive network, but they also are less likely to offer emotional support to others. Thus, a vicious cycle begins, and this cycle is likely to affect the physical and psychological health of the individual.

The TERS vs. Other Measures of Social Concern

One of the major goals of the present studies was to develop a new, more effective measure of rejection sensitivity. First, the TERS is an easily administered scale in which scores are additive across eighteen items. Conversely, the RSQ may be somewhat confusing to the respondent and meaning of the scores may be obscure because they are derived by multiplying two ratings. In addition, it appears that the TERS and RSQ are in fact constructively different based on the present series of studies. The two scales appear to be differentially related to certain measures of personality. Likewise, they yield different results in some aspects of reactions to hypothetical and actual experiences of social rejection.

Second, although the TERS is highly correlated with FNE, studies 3 and 4 illustrated conceptual and constructive differences in ratings of imagined rejection and physiological reactions to actual rejection. Therefore, the two constructs appear to relate differentially to some personality and health outcomes. Perhaps the underlying dimension for both the TERS and FNE is a general sense of worry or anxiety, but the contextual differences for such negative affect are demonstrated with the differences observed between the two scales. The present studies provided a foundation for such differences, and future research is likely to clarify these conceptual differences. Interestingly, study 4 revealed a strong correlation between the RSQ and ICQ which suggests a need for further comparative analysis between the two constructs. Much like the observed relationship between the TERS and FNE, the strong correlation suggests that perhaps the scales are measuring the same construct. However as noted earlier, further analyses of the TERS and FNE illustrated conceptual and constructive differences between the measures. Such analyses are needed between the RSQ and ICQ to isolate the uniqueness of each construct.

Finally, the TERS appears to be related to, yet distinct from the construct of loneliness. Although such distinctions were well outlined in a recent review (*see* Jobe, Jones, & Lawler, 2002), this series of studies illustrates the manner in which these two constructs relate differently (as well as similarly) to reactions to imagined and perceived exclusion.

Limitations & Future Directions

Although the present series of studies provided important clarification for the conceptualization of rejection sensitivity as it relates to other measures of personality, there were some limitations to the methodologies and some areas for further investigation of the construct of rejection expectancy.

First, further validation is needed for the TERS. For example, scores on the TERS are likely associated with dimensions of the Big 5 personality structure (e.g., agreeableness, neuroticism) as well as other measures of personality. In addition, test-retest and longitudinal analysis of the TERS is needed to provide more information about the temporal stability of the measure.

Second, further examination of the relationship between rejection sensitivity and reactions to hypothetical scenarios of exclusion are needed. It appears that rejection sensitivity is most associated with highly severe offenses and lower severity offenses, but future research is needed to untangle the reasons for why this trend might emerge. In addition, closer inspection of gender differences in responses to imagined rejection would be beneficial to the knowledge of the manner in which males and females respond differently to distinct types of transgressions. For example, research has shown that females are more distressed by emotional infidelity while males are more upset about sexual infidelity (Shackelford, Buss, & Bennett, 2002). Perhaps differences between the sexes by TERS scores would emerge depending not only the relationship to the offender, but also the type of betrayal.

Further investigation of the health consequences of rejection is also needed. Specifically, study 4 focused on immediate reactions to impending and perceived rejection. One interesting finding was that physiological differences occurred following rejection at the last measurement reading. Therefore, it is unknown as to whether or not the high rejection sensitive individuals would have rebounded immediately following reading three *or* if their heightened physiological arousal would have persisted for minutes or even hours following the incident. Therefore, a study involving a longer recovery interval following rejection would be beneficial in understanding the persistence of negative affect following exclusion. Further, many studies to date have focused on females' reactions to actual rejection experiences. However, future research should also examine the manner in which males react psychologically and physiologically to rejection experiences. In addition, the manipulation of rejection in study 4 was superficial in that participants were excluded by peers whom they did not know and with whom they never came in contact. Future studies should focus on public rejection (e.g., where an individual is rejected in front of their peers) as well as meaningful rejection (e.g., by a friend or romantic partner) to assess the mental and physical consequences of such events. Study 4 was also limited in power due to the small sample size for which analyses were conducted. It is important to note though that despite this lack in power, significant differences were still observed during the expected phases suggesting that the effect itself is rather powerful.

Lastly, it is noteworthy to acknowledge the potential homogeneity of the samples used in these studies. In each phase of this research project, participants were recruited from a large, southeastern university. Therefore, it is possible that the demographic similarities among the participants may have limited the variability observed across certain measures (e.g., spirituality). Future research should attempt to further assess such measures across more culturally-diverse samples.

Because everyone is rejected at some point in their lives, studying the emotional and physiological responses to social exclusion is necessary to understanding the short-term and long-term effects of such occurrences. Previous research has shown that reactions to rejection may vary widely depending on the social context and disposition of the person experiencing it. Upon rejection, some individuals may appear rather unaffected while others may become depressed or aggressive. Regardless of the overt behavior of a person following exclusion from a social network, rejection is typically an aversive event for everyone. Therefore, minimizing the emotional and physiological consequences following rejection may lead to overall better health outcomes.

List of References

List of References

Alberts, J.K., Kellar-Guenther, Y., & Corman, S.R. (1996). That's not funny: Understanding recipients' responses to teasing. *Western Journal of Communication, 60,* 337-357.

Asher, S.R., Hymel, S., & Renshaw, P.D. (1984). Loneliness in children. *Child Development, 55,* 1456-1464.

Asher, S.R. & Wheeler, V.A. (1985). Children's loneliness: A comparison of rejected and neglected peer status. *Journal of Consulting and Clinical Psychology, 53,* 500-505.

Baldwin, M.W. & Sinclair, L. (1996). Self-esteem and "if…then" contingencies of interpersonal acceptance. *Journal of Personality and Social Psychology, 71,* 1130-1141.

Bartholomew, K. & Horowitz, L.M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61,* 226-244.

Baumeister, R.F. & Dhavale, D. (2001). Two sides of romantic rejection. In M.R. Leary (Ed.). *Interpersonal Rejection* (pp. 55-71). London, Oxford University Press.

Baumeister, R.F. & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117,* 497-529.

Bhojak, B.L. & Mehta, P. (1970). An investigation into the causes responsible for social rejection. *Indian Journal of Social Work, 30,* 315-324.

Bowlby, J. (1969). *Attachment and Loss: Vol. 1. Attachment.* New York: Basic Books.

Buhrmester, D., Furman, W., Wittenberg, M.T., & Reis, H.T. (1988). Five domains of interpersonal competence in peer relationships. *Journal of Personality and Social Psychology, 55,* 991-1008.

Carver, C.S., Scheier, M.F., & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56,* 267-283.

Coie, J.D., Dodge, K.A., Terry, R., & Wright, V. (1991). The role of aggression in peer relations: An analysis of aggression episodes in boys' play groups. *Child Development, 62,* 812-826.

Craighead, W.E., Kimball, W.H., & Rehak, P.J. (1979). Mood changes, physiological responses, and self-statements during social rejection imagery. *Journal of Consulting and Clinical Psychology, 47,* 385-396.

Dodge, K.A., Coie, J.D., Brakke, N.P. (1982). Behavior patterns of socially rejected and neglected preadolescents: The roles of social approach and aggression. *Journal of Abnormal Child Psychology, 10,* 389-410.

Downey, G. & Feldman, S.I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology, 70,* 1327-1343.

Downey, G., Freitas, A.L., Michaelis, B., & Khouri, H. (1998). The self-fulfilling prophecy in close relationships: Rejection sensitivity and rejection by romantic partners. *Journal of Personality and Social Psychology, 75,* 545-560.

Feldman, S. & Downey, G. (1994). Rejection sensitivity as a mediator of the impact of childhood exposure to family violence on adult attachment behavior. *Development and Psychopathology, 6,* 231-247.

Fitness, J. (2001). Betrayal, rejection, revenge, and forgiveness: An interpersonal script approach. In M.R. Leary (Ed.), *Interpersonal Rejection* (pp. 73-104). New York: Oxford University Press.

Gleason, J.H., Alexander, A.M., & Somers, C.L. (2000). Later adolescents' reactions to three types of childhood teasing: Relations with self-esteem and body image. *Social Behavior and Personality, 28,* 471-480.

Graham, S. & Juvonen, J. (1998). Self-blame and peer victimization in middle school: An attributional analysis. *Developmental Psychology, 34*, 587-599.

Hale, W.D., Fiedler, L.R., & Cochran, C.D. (1992). The revised Generalized Expectancy for Success Scale: A validity and reliability study. *Journal of Clinical Psychology, 48,* 517-521.

Heatherton, T.F. & Vohs, K.D. (2000). Interpersonal evaluations following threats to self: Role of self-esteem. *Journal of Personality and Social Psychology, 78,* 725-736.

Jobe, R.L., Jones, W.H., & Lawler, K.A. (2002). *Social rejection and loneliness: An integrative review.* Unpublished Manuscript, University of Tennessee.

Jones, W.H. & Burdette, M.P. (1994). Betrayal. In A.L. Weber & J.H. Harvey (Eds.), *Perspectives on close relationships* (pp. 243-262). Boston: Allyn & Bacon.

Jones, W.H. & Carver, M.D. (1991). Adjustment and coping implications of loneliness. *Handbook of Social and Clinical Psychology.*

Jones, W.H. (1990). Loneliness and social exclusion. *Journal of Social and Clinical Psychology, 9, 214-220.*

Kelly, K.M. & Jobe, R.L. (2002). *Individual reactions to interpersonal rejection.* Unpublished Manuscript, Western Illinois University.

Kowalski, R.M. (2000). "I was only kidding!": Victims' and perpetrators' perceptions of teasing. *Personality and Social Psychology Bulletin, 26,* 231-241.

Lawler, K.A., Younger, J.W., Piferi, R.L., Billington, E.B., Jobe, R.L., Edmondson, K.A., & Jones, W.H. (In press). Forgiveness: A psychophysiological analysis. *Journal of Behavioral Medicine.*

Leary, M.R., Koch, E.J., & Hechenbleikner, N.R. (2001). Emotional responses to interpersonal rejection. In M.R. Leary (Ed.), *Interpersonal Rejection* (pp. 145-166). New York: Oxford University Press.

Leary, M.R. & Kowalski, R.M. (1995). *Social anxiety.* New York: Guilford.

Leary, M.R., Tambor, E.S., Terdal, S.K., & Downs, D.L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology, 68,* 518-530.

Leary, M.R., & Downs, D.L. (1995). Interpersonal functions of the self-esteem motive: The self-esteem system as a sociometer. In M.H. Kernis (Ed.), *Efficacy, Agency, and Self-esteem* (pp. 123-144). New York, NY: U.S. Plenum Press.

Leary, M.R. (1983). A brief version of the Fear of Negative Evaluation Scale. *Personality and Social Psychology Bulletin, 9,* 371-375.

Levy, S.R., Ayduk, O., & Downey, G. (2001). The role of rejection sensitivity in people's relationships with significant others and valued social groups. In M.R. Leary (Ed.), *Interpersonal Rejection* (pp. 251-290). New York: Oxford University Press.

Maslow, A.H. (1987). *Toward a psychology of being.* New York: Van Nostrand.

Nezlek, J.B., Kowalski, R.M., Leary, M.R., Blevins, T., & Holgate, S. (1997). Personality moderators of reactions to interpersonal rejection: Depression and trait self-esteem. *Personality and Social Psychology Bulletin, 23,* 1235-1244.

Olweus, D. (1980). Familial and temperamental determinants of aggressive behavior in adolescent boys: A causal analysis. *Developmental Psychology, 16,* 644-660.

Page, R.M., Frey, J., Talbert, R., & Falk, C. (1992). Children'ts feelings of loneliness and social dissatisfaction: Relationship to measures of physical fitness and activity. *Journal of Teaching in Physical Education, 11, 211-219.*

Paloutzian, R. & Ellison, C.W. (1982). Spirituality, well-being, and quality of life. In L. Peplau and D. Perlman (eds.). *Loneliness: A sourcebook of current theory, research, and therapy.* New York: Wiley-Interscience.

Parker, J.G. & Asher, S.R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin, 102,* 357-389.

Parker, J.G. & Asher, S.R. (1993). Friends and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29,* 611-21.

Parkhurst, J.T. & Asher, S.R. (1992). Peer rejection in middle school: Subgroup differences in behavior, loneliness, and interpersonal concerns. *Developmental Psychology, 28, 231-241.*

Piferi, R.L., Billington, E., & Lawler, K.A. (2000). The tendency to give social support scale: Reliability, validity, and relationship to health. Presented at the American Psychosomatic Society Conference, Savannah, GA.

Rotenberg, K.J., Bartley, J.L., & Toivonen, D.M. (1997). Children's stigmatization of chronic loneliness in peers. *Journal of Social Behavior and Personality, 12,* 577-584.

Russell, D., Peplau, L.A., & Cutrona, C.E. (1980). The revised UCLA loneliness scale: Concurrent and discriminate validity evidence. *Journal of Personality and Social Psychology, 39,* 472-480.

Sermat, V. (1978). Sources of Loneliness. *Essence, 2,* 271-276.

Shackelford, T.K., Buss, D.M., & Bennett, K. (2002). Forgiveness or breakup: Sex differences in responses to a partner's infidelity. *Cognition and Emotion, 16,* 299-307.

Stocker, C.M. (1994). Children's perceptions of relationships with siblings, friends, and mothers: Compensatory processes and links with adjustment. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 35*, 1447-1459.

Tambor, E.S. & Leary, M.R. (1993). *Perceived exclusion as a common factor in social anxiety, loneliness, jealousy, depression, and low self-esteem.* Unpublished Manuscript, Wake Forest University.

Vernberg, E.M., Ewell, K.K., Beery, S.H., Freeman, C.M.(1995). Aversive exchanges with peers and adjustment during early adolescence: Is disclosure helpful? *Child Psychiatry and Human Development, 26,* 43-59.

Williams, K.D. & Sommer, K.L. (1997). Social Ostracism by coworkers: Does rejection lead to loafing or compensation? *Personality and Social Psychology Bulletin, 23,* 693-706.

Williams, K.D. & Zadro, L. (2001). Ostracism: On being ignored, excluded, and rejected. In M.R. Leary (Ed.), *Interpersonal Rejection* (pp. 21-54). New York: Oxford University Press.

Zuckerman & Lubin (1965). Normative data for the Multiple Affect Adjective Check List. *Psychological Reports, 16,* 438.

Appendices

Appendix A:

Study 1

Table 1

Iterations for the Development of the Tendency to Expect Rejection Scale

Iteration Alpha	Number of Items	Mean Inter-item Correlation	Coefficient
1	82	.11	.95
2	27	.12	.88
3	25	.23	.89
4	24	.25	.89
5	18	.26	.86

Table 2

The Tendency to Expect Rejection Scale (TERS)

Final 18–Item Version
1. I can accept criticism easily. *
2. I seldom get my feelings hurt. *
3. I am sensitive to rejection.
4. I don't care too deeply about whether I am accepted or rejected by others. *
5. I am overly sensitive.
6. I am quick to take offense.
7. People who know me know my feelings are easily hurt.
8. It is important to me to be accepted by those around me.
9. Being excluded from a group wouldn't particularly bother me. *
10. The prospect of being alone does not terrify me. *
11. I'm afraid I would be devastated if someone I am close to rejected me.
12. I've always been afraid to disappoint others.
13. It has recently been extremely important to me to feel a part of a group.
14. I seem to worry more about getting my feelings hurt.
15. I worry a lot about what others think of me.
16. Lately, I worry about getting my feelings hurt.
17. Lately, I have a lot of confidence in myself around others. *
18. I go to great lengths to avoid being hurt.

** reverse-scored*

Appendix B:

Study 2

Table 3

The Relationship Between Multiple Measures of Sociability and Spirituality

	TERS	RSQ	FNE	UCLA	OPT	SWBS	EWBS	RWBS
TERS		.15*	.76**	.23**	-.24**	-.22**	-.31**	-.11
RSQ			.30**	.50**	-.44**	-.12	-.29**	.01
FNE				.32**	-.31**	-.12	-.28**	.01
UCLA					-.54**	-.36**	-.56**	-.15*
OPT						.53**	.62**	.35**
SWBS							.77**	.92**

*$p < .05$
**$p < .01$

Table 4a

The Relationship Between Multiple Measures of Sociability and Spirituality for College Males (N=47)

TERS	RSQ	FNE	UCLA	OPT	SWBS	EWBS	RWBS
TERS	.13	.75**	.06	-.11	-.37*	-.42**	-.25
RSQ		.35*	.42**	-.29	.05	-.09	.11
FNE			.28	-.23	-.25	-.49**	-.06
UCLA				-.42**	-.21	-.46**	-.02
OPT					.47**	.45**	.36**
SWBS						.68**	.92**

*$p < .05$
**$p < .01$

Table 4b

The Relationship Between Multiple Measures of Sociability and Spirituality for College Females (N = 147)

	TERS	RSQ	FNE	UCLA	OPT	SWBS	EWBS	RWBS
TERS		.18*	.75**	.35**	-.31**	-.26**	-.34**	-.14
RSQ			.32**	.51**	-.49**	-.17*	-.35**	-.01
FNE				.37**	-.35**	-.14	-.26**	-.02
UCLA					-.58**	-.40**	-.60**	-.18*
OPT						.42**	.59**	.22**
SWBS							.75**	.91**

*$p < .05$
**$p < .01$

Appendix C:

Study 3

Table 5

Rejection Scenarios

Twelve Situational Factors
1. You apply to your favorite college and they deny you admission.
2. You ask your parents to help you pay for rent while you're in school and they refuse to help.
3. You find out that your fiancé has been cheating on you.
4. You ask your boyfriend/girlfriend to go out and he/she tells you that they already have other plans.
5. Your friends go to a big party and they don't invite you.
6. Your mother tells her friends a secret you asked her to keep.
7. You ask someone in your class out on a date, and they say "No."
8. You catch your friend going through your purse/wallet.
9. You ask your significant other for sex, and they say they don't feel like it.
10. You loan money to a friend and he/she never pays you back.
11. You've been dating for 6 months, and your partner tells you that he/she would like to see other people.
12. Your parents get divorced and one of them moves over 1000 miles away from you.

Table 6

Relationship Between Measures of Rejection and Loneliness and Single-Item Trait Affect Adjectives

	TERS	RSQ	UCLA Loneliness Scale
Rejected	.42***	.28**	.44***
Depressed	.35***	.31***	.49***
Joyous	-.17*	-.22**	-.46***
Optimistic	-.29***	-.30***	-.36***
Lonely	.33***	.24**	.51***
Excluded	.41***	.21**	.56***
Confident	-.41***	-.26**	-.33***
Satisfied	-.20**	-.24**	-.36***
Energetic	-.26**	-.22**	-.35***
Spiritual	-.05	-.08	-.09
Fearful	.24**	.15	.24**
Worried	.47***	.20*	.29***
Included	-.24**	-.21**	-.54***
Angry	.24**	.18*	.23**
Betrayed	.34***	.28***	.36***

*$p < .05$
**$p < .01$
***$p < .001$

Table 7

Relationship Between Measures of Rejection and Loneliness and Composite Ratings of Positive and Negative Trait Affect

	Positive Affect	Negative Affect
TERS	-.33**	.53**
RSQ	-.34**	.34**
UCLA	-.51**	.55**

** $p < .001$

Table 8

Severity Ratings of Hypothetical Rejection Scenarios

Scenario	Severity Rating	Mean	SD	Range
1. *college denies admission*	5	3.72	1.04	1-5
2. *parents refuse to help with rent*	6	3.66	1.00	1-5
3. *fiance' cheating*	1	4.91	.33	3-5
4. *boyfriend/girlfriend has other plans*	12	2.25	.98	1-5
5. *friends don't invite you to party*	8	3.32	.98	1-5
6. *mother tells your secret*	3	3.99	.88	1-5
7. *classmate says "No" to date request*	11	2.60	1.10	1-5
8. *friend going through your purse/wallet*	7	3.40	1.32	1-5
9. *partner doesn't feel like having sex*	10	2.64	1.18	1-5
10. *friend doesn't repay loan*	9	3.13	1.03	1-5
11. *partner wants to see other people*	4	3.91	.95	1-5
12. *parents divorce and one moves away*	2	4.20	1.15	1-5

Table 9

Relationship Between TERS scores and Severity Ratings of Scenarios By Gender

Scenarios	Males	Females
1. college denies admission	.45**	.32**
2. parents refuse to help with rent	.17	.05
3. fiance' cheating	.23	.27**
4. boyfriend/girlfriend has other plans	.38*	.26**
5. friends don't invite you to party	.40**	.39**
6. mother tells your secret	.11	.17
7. classmate says "No" to date request	.59**	.21*
8. friend goes through purse/wallet	.19	.14
9. partner doesn't feel like having sex	.35*	.13
10. friend doesn't repay loan	-.03	.09
11. partner wants to see other people	.41**	.27**
12. parents divorce and one moves away	-.03	.26**

*$p < .05$
**$p < .01$

Table 10

Relationship Between Social Evaluative Concern and Severity Ratings According to Relationship of the Transgressor

	Parent	Mate	Friend	Stranger
TERS	.26**	.42**	.17*	.44**
RSQ	-.02	-.21**	.10	.32**
UCLA	-.17*	.08	.02	.16*

* $p < .05$
** $p < .01$

Table 11

Rejection Expectancy, Rejection Sensitivity, Loneliness, and Severity Ratings of Hypothetical Rejection Scenarios

	Scen1	Scen2	Scen3	Scen4	Scen5	Scen6	Scen7	Scen8	Scen9	Scen10	Scen11	Scen12
TERS	.39**	.13	.27**	.28**	.40**	.12	.34**	-.03	.20**	.01	.33**	.19*
RSQ	.17*	.05	.02	.20*	.20*	.05	.36**	.05	.12	-.04	.14	-.09
UCLA	.11	-.15	-.06	.12	.01	.02	.14	.06	.11	-.05	-.03	-.18*

* $p < .05$
** $p < .001$
Scenario codes: 1 – college admission; 2 – parents rent; 3 – fiance cheating; 4 – mate other plans; 5 – friend party; 6 – mother secret; 7 – classmate "No" date; 8 – friend wallet; 9 – partner sex; 10 – friend loan; 11 – partner see others; 12 – parents divorce

Table 12

Relationship Between Measures of Rejection and Loneliness and Severity Ratings of High, Moderate, and Low Severity Offenses

	High Severity	Moderate Severity	Low Severity
TERS	.25**	.06	.38***
RSQ	-.11	.07	.34***
UCLA	-.20*	-.04	.15

* $p < .05$
** $p < .01$
*** $p < .001$

Table 13a

Relationship Between Social Evaluative Concern and Severity Ratings According to Relationship of the Transgressor in *Males*

	Parent	Mate	Friend	Stranger
TERS	.15	.54**	.29	.61**
RSQ	-.16	.32*	.17	.30
UCLA	-.20	.19	-.00	.29

*$p < .05$
**$p < .001$

Table 13b

Relationship Between Social Evaluative Concern and Severity Ratings According to Relationship of the Transgressor in *Females*

	Parent	Mate	Friend	Stranger
TERS	.28*	.34**	.13	.32**
RSQ	.08	.17	.06	.37**
UCLA	-.13	.05	.01	.15

* $p < .01$
** $p < .001$

Table 14

Relationship Between Social Evaluative Concern and Responses to the Emotional State *"Rejected"* Following Scenarios Categorized by Severity

	High Severity	Moderate Severity	Low Severity
TERS	.41**	.20*	.40**
RSQ	.30**	.10	.34**
UCLA	.20*	.15*	.29**

* $p < .05$
** $p < .001$

Appendix D:

Study 4

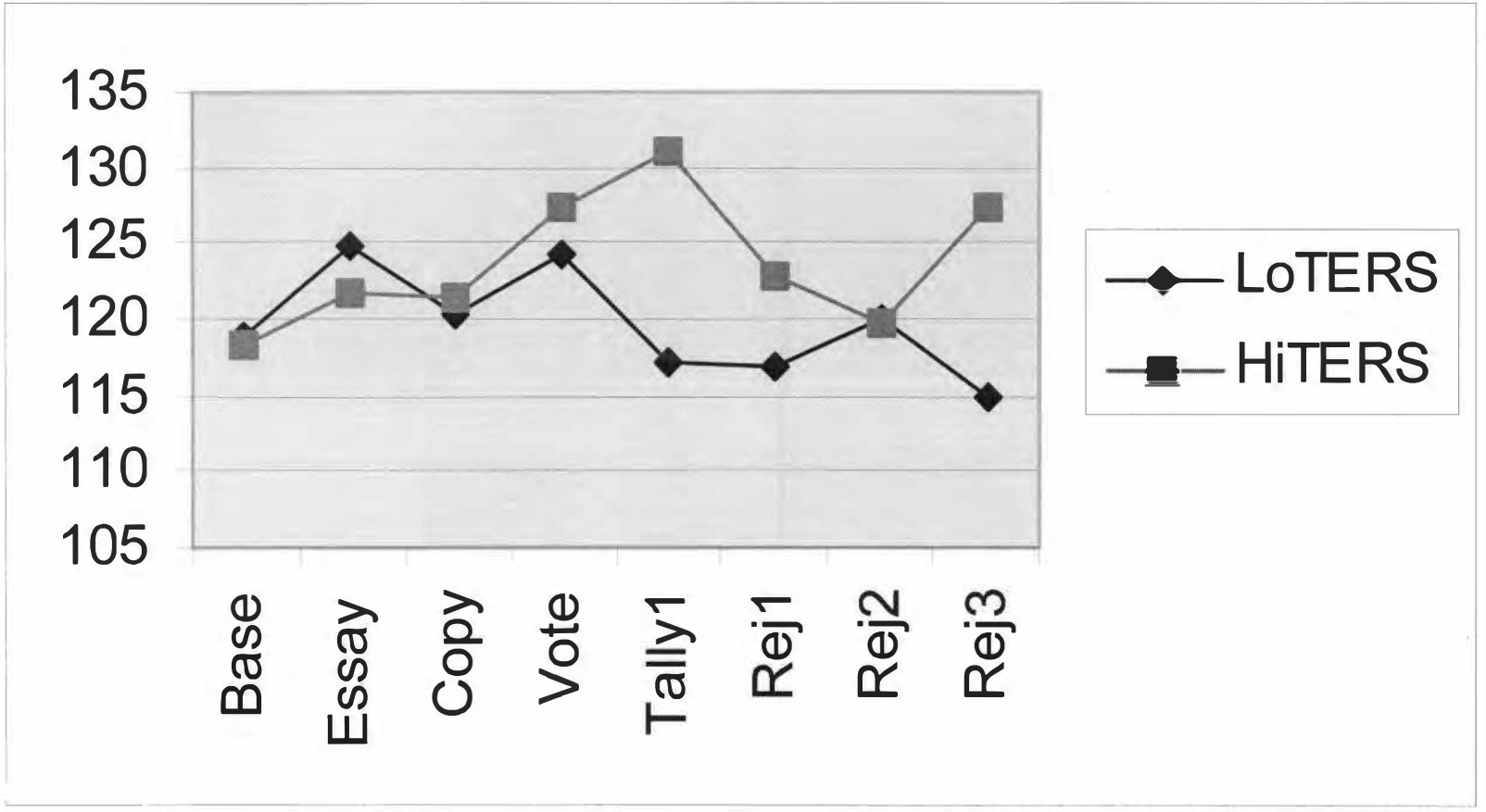

Figure 1

Mean SBP Across All Phases For High and Low Rejection Sensitive Females

Table 15

Relationship Among Social Evaluative Concern and Measures of Interpersonal Competence and Giving Social Support

	TERS	RSQ	UCLA	FNE
ICQ	-.47*	-.75***	-.33	-.46*
TGSS	-.40	-.40	-.50*	-.25
TGSS-EmotionalSupp	-.47*	-.52*	-.55**	-.35
TGSS-StressRelief	-.39	-.45*	-.42*	-.23
TGSS-Advice/ProbSolv	-.40	-.12	-.34	-.21
TGSS-Socialization	-.10	-.19	-.40	-.01
TGSS-TangibleAid/Assist	-.34	-.27	-.42*	-.29

* $p < .05$
** $p < .01$
*** $p < .001$

Vita

Rebecca Lee Jobe was born in Macomb, IL on October 22, 1974. She graduated from Bushnell-Prairie City High School in 1992, and went on to complete a B.A. (Psychology), B.A. (English), and B.S.Ed. (Secondary Education) at the University of Missouri-Columbia. After graduating in 1997, Rebecca entered the graduate program at Western Illinois University. During her graduate career at W.I.U., Rebecca married David Jobe and the couple moved to St. Louis, Missouri. Upon completion of her M.S. in 1999, she was accepted into the Doctoral Program at the University of Tennessee-Knoxville. The couple moved to Knoxville in July, 1999. David continued to work for Bank of America and Rebecca began the Ph.D. program. Rebecca successfully defended her dissertation on March 31, 2003. She and her husband currently reside in Knoxville.